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Supreme Court, U.S.
FILED

OCT 6 - 2009

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No. 09-412

IN THE
Supreme Court of the United States

SMC CORPORATION and
SMC CORPORATION OF AMERICA,

Petitioners,

v.

NORGREN, INC.,

Respondent,

and

U.S. INTERNATIONAL TRADE COMMISSION

Respondent.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

PETITION FOR WRIT OF CERTIORARI

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QUESTION PRESENTED FOR REVIEW

The claims in a patent are critical since they define the scope of the exclusionary right. Prior to *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996), the jury construed the claims. Although this Court in its *Markman* decision *supra* held as a matter of policy that the claims should be construed by the district court, this Court did not hold that this construction was entitled to no deference upon appeal.

In *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448 (Fed. Cir. 1998) (*en banc*), the Federal Circuit held that a district court's claim construction was entitled to no deference upon appeal. This ruling has resulted in a highly unsatisfactory situation during the last eleven years, *i.e.*, a claim construction reversal rate of roughly 40%, a need for many patent cases to be tried more than once, and increasing dissatisfaction by the district courts whose claim constructions are afforded no deference and are reversed almost half the time. Although some Federal Circuit judges have long recognized this problem, it appears that its correction can only come from this Court. Thus, the question presented for review is -

Should the Federal Circuit accord deference to a district court's claim construction?

CORPORATE DISCLOSURE STATEMENT

SMC Corporation is the parent of SMC Corporation of America. No publicly held company owns 10% or more of its stock.

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OPINIONS BELOW

The Federal Circuit's decision is reported at 2009 U.S. App. LEXIS 10984 (Fed. Cir. 2009). The ALJ's decision (adopted by the ITC) is reported at 2008 ITC LEXIS 285 (ITC 2008).

JURISDICTION

The Federal Circuit's decision was entered on May 26, 2009. SMC's petition for rehearing *en banc* was denied on August 21, 2009. The basis for this Court's jurisdiction is 28 U.S.C. §1254(1).

STATEMENT OF CASE

Procedural History

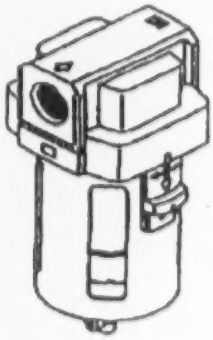
Respondent Norgren Inc. ("Norgren") filed a complaint before the U.S. International Trade Commission ("ITC") against SMC Corporation and SMC Corporation of America (collectively "SMC") asserting infringement of U.S. patent 5,372,392 ("the '392 patent"). Administrative Law Judge ("ALJ") Carl C. Charneski conducted a hearing and developed an evidentiary record. Based on this record, the ALJ provided claim constructions for the disputed claim terms, and found non-infringement based upon his construction of the claim term "a generally rectangular ported flange." The ITC adopted this decision as its final determination.

Norgren appealed to the Federal Circuit and SMC intervened. The Federal Circuit afforded the ALJ's construction no deference, adopted its own *de*

novo construction, held that SMC literally infringed and remanded to the ITC to reconsider validity of the '392 patent under the Federal Circuit's new claim construction. SMC filed a petition for rehearing *en banc* in which it challenged, *inter alia*, the Federal Circuit's rule in *Cybor* that a district court's claim construction is entitled no deference, but its petition was denied.

SMC's Products

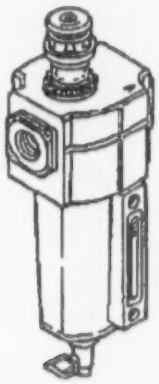
The subject matter of this suit pertains to a connector (or clamp) used to connect components, such as a filter ("F"), regulator ("R") or lubricator ("L"), in a pneumatic (air) line. The accused SMC connectors are designed to connect FRL's having two mounting ears (an ear on each side of a face), which are received into the connector. These mounting ears are shown below in orange.



SMC's Mounting Ears

Norgren's '392 Patent

Norgren's '392 patent is directed to a connector which, instead of connecting mounting ears, is designed to connect to a generally rectangular ported flange on the FRL units. Norgren's flange, claimed as "a generally rectangular ported flange," is shown below in red. (SMC's mounting ears preceded Norgren's rectangular ported flange by about ten years).



Norgren's Generally Rectangular Ported Flange

ALJ's Decision

After a three day evidentiary hearing during which the ALJ heard testimony on claim construction by both Norgren's and SMC's experts, and after the submission of extensive post trial briefing, the ALJ issued a comprehensive 66 page Initial Determination, that includes a 33 page section on claim construction, App. 23a-62a, of which 15 pages are dedicated to the construction of the claim term "a

generally rectangular ported flange," App. 35a-52a, concluding that "'a generally rectangular ported flange' is *a flange of rectangular shape with projections on all four sides and a hole in the middle that is used as a port.*" App. 44a, emphasis added. This construction was not surprising since a rectangle has four sides.

The ALJ discounted the testimony of Norgren's expert since, during the hearing, he admitted that he did not review the prosecution history, he did not even know what a prosecution history was, and he had no concern that his interpretation of claim language might be inconsistent with the prosecution history. App. 48a.

The ITC declined Norgren's request to review the ALJ's decision, adopting it as its final determination. App. 11a-14a.

Federal Circuit's Decision

Despite the ALJ's detailed consideration of the proper claim construction for "a generally rectangular ported flange," the Federal Circuit gave his decision short shrift, holding that "[w]e review claim construction de novo," citing *Cybor*. Unbound by any requirement that it afford any deference to the ALJ's decision, the Federal Circuit proceeded to find for reasons not entirely clear in its decision that the language a "generally rectangular ported flange" did not require a flange which was generally rectangular with a port in its center.

The Federal Circuit afforded no deference to the ALJ's consideration of what transpired at the evidentiary hearing, or to his well-reasoned claim construction, and concluded with little explanation that "[n]othing in the claims, written description or prosecution history requires four projecting rims." App. 7a. However, the claims do require a "generally rectangular" ported flange and a rectangle has four sides. The Federal Circuit further stated that "[t]he claims of the '392 patent do not recite the terms 'rim' or 'projection.'" *Id.* However, the claims do recite the term "generally rectangular ported flange" which requires four "rims" or "projections" since a rectangle has four sides.

The Federal Circuit also concluded with little explanation that "under the well-established prohibition on importing limitations from the specification into the claims, see *Phillips v. AWH Corp.*, 415 F.3d 1303, 1320, 1323, the 'generally rectangular ported flange' of the asserted claims of the '392 patent is not limited to a flange having four projecting rims." App. 8a. This conclusion is directly contrary to the ALJ's determination that:

> In view of the fact that the clamp must be four-sided, and the clamp is specifically adapted to engage the generally rectangular ported flanges of the FRLs, it is reasonable to conclude that each rectangular flange is engaged on all four of its sides by the four-sided clamp. Thus, the clamp is adapted to engage flanges with four projecting rims.

App 52a.

The ALJ further explained that:

> Norgren offers no explanation as to why, if the clamp were adapted to engage a flange with only two projecting rims, the claim emphasizes the generally rectangular shape of the flange, and moreover, why the claim requires as a limitation that the clamp be four-sided. There is nothing in the claim language, the specification, or the prosecution history (quoted above) to indicate that somehow a four-sided clamp fitting over a generally rectangular (*i.e.*, four-sided) flange could fit over only two sides of the rectangle, *or how a rectangle could have only two sides.*

App. 57a, emphasis added.

The Federal Circuit's decision is also contrary to the fundamental claim construction rule in *Phillips, supra,* that the specification is "the single best guide to the meaning of a disputed term."

> *Assigning such a limited role to the specification*, and in particular requiring that any definition of claim language in the specification be express, *is inconsistent with our rulings that the specification is "the single best guide to the meaning of a disputed term*," and that the specification "acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication." *Vitronics*, 90 F.3d at 1582; *Irdeto Access, Inc. v. Echostar*

> *Satellite Corp.*, 383 F.3d 1295, 1300 (Fed. Cir. 2004) ("Even when guidance is not provided in explicit definitional format, *the specification may define claim terms by implication* such that the meaning may be found in or ascertained by a reading of the patent documents.") (citations omitted).

Phillips, 415 F.3d at 1320-21, emphasis added.

Phillips was followed by the ALJ but the Federal Circuit failed to heed its mandate that the focus be upon the language of the claim as supported by the specification (and drawings) and not upon extrinsic matters. Pursuant to this mandate, the Federal Circuit should have focused upon the claim language "a generally rectangular ported flange" and not upon the extrinsic terms "rim" or "projection."

Had the Federal Circuit accorded deference to the ALJ's claim construction, its conclusion likely would have been different and correct. In short, the ALJ correctly held that the claim term rectangular ported flange required a flange in the shape of a rectangle, *i.e.*, one with four sides. The Federal Circuit, however, according no deference to the ALJ's claim construction, held that the claim term rectangular ported flange did not require a flange with four sides ("nothing in the claims ... requires four projecting rims [sides]"). *Cybor's* "no deference" rule permitted the Federal Circuit to summarily dismiss the ALJ's construction and find that a rectangular ported flange need not have four sides.

REASONS FOR GRANTING THE PETITION

Cybor's "No Deference" Rule Has Resulted in an Unacceptably High Roughly 40% Reversal Rate

In his law review article entitled "The Patent Litigation Predicament in the United States," Chief Judge James F. Holderman of the United States District Court for the Northern District of Illinois states that "the reversals by the Federal Circuit of district court decisions on patent claim construction *are nothing of which to be proud*" and describes reversal rates of 33-50%. App. 132a, emphasis added.

> Depending on what statistics and whose opinion one looks at, the reversals by the Federal Circuit of district court decisions on patent claim construction *are nothing of which to be proud.* The rate of these reversals *adds to the uncertainty in patent litigation.* In 1998, two years after the United States Supreme Court's opinion in Markman v. Westview Instruments, Inc. affirming the Federal Circuit's decision, Federal Circuit Judge Randall Rader, in his concurrence in the en banc decision Cybor Corp. v. FAS Technologies, Inc., opined that from his vantage point it appeared *the reversal rate regarding patent claim construction by district court judges was "hovering near 50%"* for the cases decided during the approximately two and a half year period of April 1995 through November 1997. After that startling revelation from a highly respected appellant jurist, Professor

> Kimberly Moore, now herself a judge of the United States Court of Appeals for the Federal Circuit, undertook a detailed analysis of all Federal Circuit claim construction cases from April 23, 1996, (the day the Supreme Court issued its decision in Markman) through December 31, 2000, and concluded "that *district judges improperly construe patent claim terms in 33% of the cases appealed to the Federal Circuit.*" Another scholar, Christian A. Chu, studied Federal Circuit cases between January 1, 1998, and April 30, 2000. Chu *found that the reversal rate was 44%. Other similar studies placed the reversal rate around 40%.*

App. 132a-133a, emphasis added, footnotes omitted. Although the case at bar involves the ITC, the ALJ in an ITC proceeding functions as a trial judge similar to a district court judge with respect to claim construction.

Judge Holderman's article refers to a number of studies showing a 40% reversal rate which, not surprisingly, leads to "uncertainty and unpredictability in patent litigation."

> E.g., Gretchen Ann Bender, Uncertainty and Unpredictability in Patent Litigation: The Time is Ripe for Consistent Claim Construction Methodology, *8 J. Intell. Prop. L. 175, 206-07 (Spring 2001)* (*finding a 40% reversal rate* from Markman opinion through 2000); Kimberly A. Moore, Markman Eight Years Later: Is Claim Construction More

> Predictable?, *9 Lewis & Clark L. Rev. 231, 236-39 (2005)* [hereinafter Moore, Markman Eight Years Later] *(indicating a 40.8% reversal rate if summary affirmances are excluded, a 34.51% if summary affirmances are included, and a 37.5% reversal rate in cases in which the Federal Circuit held one or more patent claims wrongly construed)*; Andrew T. Zidel, Patent Claim Construction in the Trial Courts: A Study Showing the Need for Clear Guidance from the Federal Circuit, *33 Seton Hall L. Rev. 711, 745-46 (2003) (showing a 41.5% reversal rate* (39 out of 94) of district court claim construction decisions during 2001).

App. 161a-162a, n.11, emphasis added.

There can be little disagreement that a 40% reversal rate is unacceptably high for a properly functioning patent system. At least four Federal Circuit judges have expressed a desire to overrule *Cybor's* "no deference" rule, but it does not appear that the Federal Circuit is willing to do so.

Chief Judge Michel stated that *Cybor's* "no deference" rule is the source of four serious problems - (1) a steadily high reversal rate, (2) a lack of predictability which "confounds" trial judges and discourages settlements, (3) a waste of the district court's claim construction, especially where the district court spent much more time on it than the Federal Circuit ever could and (4) the need for the Federal Circuit to redo the tedious "minutia" of claim construction.

> Rehearing this case *en banc* would have enabled us to reconsider *Cybor's* rule of de novo review for claim construction in light of our eight years of experience with its application. *I have come to believe that reconsideration is appropriate and revision may be advisable.*
>
> In my view, four practical problems have emerged under the *Markman-Cybor* regime: (1) *a steadily high reversal rate*; (2) *a lack of predictability about appellate outcomes,* which may confound trial judges and discourage settlements; (3) *loss of the comparative advantage often enjoyed by the district judges* who heard or read all of the evidence and may have spent more time on the claim constructions than we ever could on appeal; and (4) *inundation of our court with the minutia of construing numerous disputed claim terms* (in multiple claims and patents) in nearly every patent case.
>
> ***
>
> *Whatever our resolution, however, I believe the time has come for us to re-examine Cybor's no deference rule.* I hope that we will do so at our next opportunity, and I expect we will.

Amgen Inc. v. Hoechst Marion Roussel Inc., 469 F.3d 1039, 1040-41 (Fed. Cir. 2006) (Michel, C.J., with whom Rader, J., joins, dissenting from the denial of the petition for rehearing *en banc*), emphasis added.

Similarly, Judge Newman stated:

> I continue to believe that findings of science/technology-based facts in [claim constructions in] patent cases should receive appellate review on the same basis as other science-based findings, guided by Daubert and the Court's ensuing elaborations. ... *It is time to reopen the question and to rethink, en banc, the optimum approach to accuracy, consistency, and predictability in the resolution of patent [claim construction] disputes, with due attention to judicial structure, litigants' needs, and the national interest in invention and innovation.*

Id. at 1043 (Newman, J., dissenting), emphasis added.

Judge Rader was of a like view - "I agree with the reasoning of Chief Judge Michel's and Judge Newman's dissents. *Like them, I urge this court to accord deference to the factual components of the lower court's claim construction.*" *Id.* at 1044 (Rader, J., dissenting), emphasis added.

Judge Moore also dissented - "I dissent because I believe *this court should have taken this case en banc to reconsider its position on deference to district court claim construction* articulated in *Cybor Corp. v. FAS Tech., Inc.*, 138 F.3d 1448, 1454-55 (Fed. Cir. 1998) (holding that claim construction was purely a matter of law and therefore subject to de novo review)." *Id.* at 1046 (Moore, J., dissenting), emphasis added.

The American Bar Association ("ABA"), whose Intellectual Property Law Section is the world's largest organization of intellectual property professionals (App. 102a), previously submitted an amicus brief to this Court seeking to overturn *Cybor's* "no deference" rule, noting that this rule has resulted in "a high reversal rate" which in turn has "increased the cost of litigation by frequently requiring relitigation of issues following a reversal."

> One consequence of the Federal Circuit's plenary *de novo* review of these fact-intensive issues, as one would expect, has been *a high reversal rate.*[3] This high reversal rate has *significantly increased the cost of litigation by frequently requiring relitigation of issues following a reversal*, or at the very least forcing parties to put in proof and make arguments in the alternative because of the uncertainty of the final claim construction.
>
> [3] *See, e.g.*, Kimberly A. Moore, *Markman Eight Years Later: Is Claim Construction More Predictable?*, 9 Lewis & Clark L. Rev. 231, 232 (2005) (citing 34.5% reversal rate for 1996-2003); *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448, 1476 (Fed. Cir. 1998) (Rader, J., dissenting) (38.3% reversal rate per court's 1997 official statistics).

App. 103a-104a, emphasis added, footnotes omitted.

The ABA further pointed out that *Cybor's* "no deference" rule is particularly inappropriate since it is the district courts and not the Federal Circuit that are better situated to apply a fact-dependent legal standard such as the standard used in claim construction (the meaning of the claims to one skilled in the art).

> The *Cybor* approach gives insufficient recognition to the proper competencies of the trial and appellate courts. As this Court has recognized, *district courts are better situated to apply fact-dependent legal standards. See Cooter & Gell v. Hartmarx Corp.*, 496 U.S. 384, 402 (1990) ("Familiar with the issues and the litigants, *the district court is better situated than the court of appeals to marshal the pertinent facts and apply the fact-dependent legal standard.*"); *see also Salve Regina College v. Russell*, 499 U.S. 225, 233 (1991) ("deferential review of mixed questions of law and fact is warranted when it appears the district court is 'better positioned' than the appellate court to decide the issue in question or that probing appellate scrutiny will not contribute to the clarity of legal doctrine"). *District court findings on fact-intensive inquiries underlying claim constructions, Phillips*, 415 F.3d at 1331, *should be given deference for precisely these reasons.*

App. 106a, emphasis added.

The ABA further noted that *Cybor's* "no deference" rule resulted in "a substantial reversal rate, ... considerable inefficiencies, unpredictability and added expense."

> The *de novo* review of all aspects of claim constructions under Cybor has contributed to *a substantial reversal rate of district court rulings by the Federal Circuit.* Members of the ABA have observed that instead of having the intended effect of "providing national uniformity to the construction of a patent claim," Cybor, 138 F.3d at 1455, this approach instead has introduced into patent litigation *considerable inefficiencies, unpredictability, and added expense.*

App. 107a, emphasis added, footnotes omitted.

The ABA concluded that reviewing the underlying findings of fact in a claim construction for clear error would decrease the reversal rate which would reduce patent litigation costs which in turn would benefit both patentees and accused infringers alike.

> Reviewing a district court's ultimate claim construction *de novo* and the underlying findings of fact for clear error will decrease the reversal rate at the Federal Circuit. A lower reversal rate would help reduce patent litigation costs by limiting instances of relitigation and the use of inefficient trial strategies that account for the likelihood of

> reversal, which in turn would benefit both patentees and accused infringers alike.

App. 107a-108a, footnotes omitted.

The Federal Circuit Bar Association ("FCBA"), a national organization consisting of approximately 2,400 attorneys whose practice concerns the Federal Circuit in all aspects of its jurisdiction (App. 111a), also previously submitted an amicus brief to this Court seeking to overturn *Cybor's* "no deference" rule, noting that this rule "has produced an unacceptably high appellate reversal rate of claim constructions, spawning uncertainty among patent litigants, postponing resolution of patent cases, and discouraging settlement." App. 112a.

The FCBA further noted the surprising reluctance of the Federal Circuit to reconsider *Cybor's* "no deference" rule.

> The Federal Circuit has refused to reconsider *Cybor despite widespread recognition among practitioners—and even a majority of the Federal Circuit's own judges—that Cybor is seriously flawed.* In the nine years since the Federal Circuit decided *Cybor*, *de novo* review of claim construction has *rendered patent litigation less predictable, spawned unnecessary legal conflict, and discouraged settlement.*

App. 113a, emphasis added.

The FCBA further pointed out that its members had litigated patent claims under *Cybor's* "no

deference" rule for many years with highly unsatisfactory results.

> Our members have now litigated patent claims under the *Cybor* rule for nine years. As the result of this experience, the FCBA has concluded that, not only has *de novo* review of claim construction failed to "improve the process of patent litigation"; *it has spawned an unacceptably high reversal rate and, with it, endemic uncertainty among litigants and practitioners.*

App. 116a, emphasis added, footnote omitted.

In fact, as pointed out by the FCBA, *Cybor's* "no deference" rule has produced the opposite of its desired effect.

> *As a result, Cybor has produced the opposite of its desired effect.* Far from encouraging authoritative early construction of patent claims, *de novo* review instead defers until the appellate decision the point at which litigants and practitioners can reliably assess their likelihood of prevailing. At that point, the opportunity for early resolution is long past. As Judge Rader explains, the "Markman I regime means that *the trial court's early claim interpretation provides no early certainty at all, but only opens the bidding.* The meaning of a claim is not certain until nearly the last step in the process—decision by the Court of Appeals for

> the Federal Circuit." *Cybor*, 138 F.3d at 1476 (Rader, J., dissenting).

App. 117a, emphasis added.

The FCBA also noted the inconsistency between the statements of a number of Federal Circuit judges that they desired to revisit *Cybor's* "no deference" rule with the contradictory fact that the Federal Circuit continually fails to do so.

> As recently as 2005, the Federal Circuit refused to revisit the *Cybor* rule *en banc*, even after requesting briefing from the parties on whether it is "appropriate . . . to accord any deference to any aspect of trial court claim construction rulings." *Phillips*, 415 F.3d at 1328. *Because the Federal Circuit has inexplicably refused to revisit Cybor despite the inclination of many of its judges to do so, and because the Cybor rule undermines the orderly and timely resolution of patent cases, this Court should grant the Petition for Certiorari.*

App. 122a, emphasis added, footnote omitted.

Cybor's "No Deference" Rule Has Alienated the District Courts Whose Claim Constructions Are Reversed Almost Half the Time

There is little dispute that claim construction proceedings require a great deal of time and effort. Claim construction or *Markman* hearings "are often longer than jury trials" and, in these hearings, the

> parties battle over experts offering conflicting evidence regarding who qualifies as one of ordinary skill in the art; the meaning of patent terms to that person; the state of the art at the time of the invention; contradictory dictionary definitions and which would be consulted by the skilled artisan; the scope of specialized terms; the problem a patent was solving; what is related or pertinent art; whether a construction was disallowed during prosecution; how one of skill in the art would understand statements during prosecution; *and on and on.*

Phillips, supra, 415 F.3d at 1332 (Mayer, J., with whom Newman, J., joins dissenting), emphasis added.

Not surprisingly, district courts are alienated by a system requiring they devote extensive time and effort to hear and decide claim construction issues only to have their decisions reversed almost half the time since the Federal Circuit, pursuant to *Cybor*, affords their decisions no deference.

Judge Holderman, in his law review article, laments the "high reversal rate" and characterizes *Cybor's* "no deference" rule as "another major factor contributing to the number of patent claim construction reversals."

> Before we district court judges shoulder all the responsibility for the part of the patent litigation predicament stemming from the

> high reversal rate, mentioned earlier, let me just say in our defense that *there is another major factor contributing to the number of patent claim construction reversals.* The decisions we district judges make regarding patent claim construction are currently reviewed by the United States Court of Appeals for the Federal Circuit under a de novo standard, which allows the United States Court of Appeals for the Federal Circuit *to determine the correctness of our rulings as to the definition of patent claim terms without any deference to what we did in the district court.*

App. 138a, emphasis added, footnotes omitted.

Judge Holderman further complains about the impact of *Cybor's* "no deference" rule.

> As a result of the de novo standard of appellate review applied to our claim construction determinations, *we United States district court judges feel like the late comedian Rodney Dangerfield because our opinions "get no respect."* The de novo standard allows the United States Court of Appeals for the Federal Circuit to look at our determinations anew and determine the correctness of our rulings based upon factual and legal arguments presented by counsel to the Court of Appeals for the Federal Circuit, *rather than what was presented to us trial court judges.*

App. 139a, emphasis added, footnotes omitted.

Judge Holderman also points out that it makes little sense to review claim construction *de novo* because the meaning of a patent claim term has no precedential effect on the meaning to be given to that same claim term used in another patent in another field of art.

> While claim construction involves many of what one would consider to be factual determinations, it is reviewed entirely de novo as an issue of law by the Federal Circuit, *even though the meaning of a patent claim term at the time of filing of the patent application has no precedential affect on the meaning to be given to that same claim term used in another patent in another field of art.*

App. 139a-140a, emphasis added.

Cybor's "No Deference" Rule Is Not Supported By This Court's *Markman* Decision

The Federal Circuit's stated basis for *Cybor's* "no deference" rule is this Court's *Markman* decision. *Cybor*, 138 F.3d at 1451. However, this Court held only that, as a matter of policy, judges not juries should construe the claims and did not hold that this policy requires the Federal Circuit to review district court claim constructions without deference. As pointed out by then Chief Judge Mayer (joined by Judge Newman) dissenting in *Cybor*,

> ... I respectfully disagree with the opinion because it *profoundly misapprehends Markman v. Westview Instruments, Inc.*, 116 S.Ct. 1384 (1996). The Supreme Court ... decided as a matter of *policy* that judges, not juries, are better able to perform this task [claim construction] given the complexity of evidence and documentation. ... Nevertheless, having so ruled, it seems to me the Court would not also have repealed part of the Federal Rules of Civil Procedure and Evidence without so much as a mention that district courts ... need not find facts when evidence is disputed in these cases. *Nor would it have so excused this court from the normal, historical role of appellate courts to review for reversible error, and installed it as a collegial trial court.*

Cybor, 138 F.3d at 1463-64, emphasis added (except for "policy").

Judge Newman also submitted a separate dissent (joined by Chief Judge Mayer),

> Thus it is quite discouraging to observe this en banc ruling *wherein the Federal Circuit prohibits itself from considering the findings of fact made by the trial court.* ... This disavowal deprives the court, and the parties, of the accumulated progress and experience of the trial, including the findings of the trial judge, and leaves us on appeal with an expurgated record and generally inferior basis of decision. Recognizing that

> our appellate role is to decide whether the claims were correctly interpreted in light of all of the evidence, *it is mysterious why we choose to self-censor what we will consider on appeal. It is equally obscure why this court would prohibit itself from relying on a trial court's findings, or from choosing between disputed expert positions.*

Id. at 1481, emphasis added.

CONCLUSION

The Federal Circuit has been reviewing district court claim constructions under *Cybor's* "no deference" rule for over eleven years. This rule has led to an unacceptably high roughly 40% reversal rate for claim constructions. Further, this rule has alienated the district courts whose claim constructions are accorded no deference and are reversed almost half the time. Although some Federal Circuit judges want to reconsider this rule, the Federal Circuit has not done so and does not appear to be willing to do so. As a practical matter, only this Court can vacate this rule and its highly unacceptable roughly 40% claim construction reversal rate.

Respectfully submitted,

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October 6, 2009

APPENDIX

Appendix A

NOTE: This disposition is nonprecedential.

United States Court of Appeals
for the Federal Circuit

2008-1415

NORGREN INC.,

Appellant,

v.

INTERNATIONAL TRADE COMMISSION,

Appellee,

and

SMC CORPORATION and
SMC CORPORATION OF AMERICA,

Intervenors.

On appeal from the United States International Trade Commission in Investigation No. 337-TA-587.

DECIDED: May 26, 2009

Before SCHALL, GAJARSA, and MOORE, Circuit Judges.

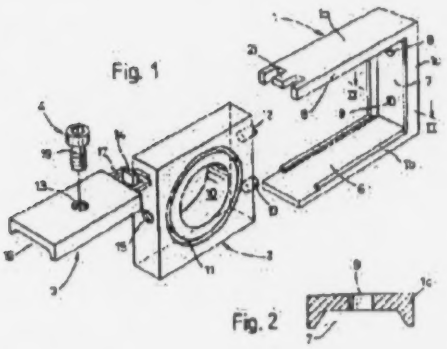
MOORE, Circuit Judge.

Norgren, Inc. (Norgren) appeals from a final determination of the International Trade Commission (ITC) in a section 337 investigation. See 19 U.S.C. § 1337. Norgren is the assignee of U.S. Patent No. 5,372,392 (the '392 patent). The ITC instituted this investigation based on a complaint filed by Norgren that named SMC Corporation and SMC Corporation of America (collectively, SMC), among others, as respondents. The administrative law judge (ALJ) concluded in an initial determination that SMC did not violate section 337 because the accused SMC structures do not infringe the '392 patent. The ALJ also determined that the asserted claims of the '392 patent are nonobvious. The ITC declined to review the ALJ's initial determination and terminated the investigation with a finding of no violation. Norgren appeals. For the following reasons, we reverse-in-part, vacate-in-part, and remand.

BACKGROUND

The technology at issue concerns structures that connect fluid-conditioning units—e.g., filters, regulators, and lubricators (FRLs)—in a compressed air pipeline. Between an air compressor and a point of use, a pipeline can include various conditioning units connected in series. Problems associated with prior art connecting structures included high production costs and loose parts requiring assembly by a user. An object of the invention of the '392 patent was to permit ready disconnection of FRLs. These compressed air systems are typically found in assembly-line manufacturing operations, and ready

disconnection of FRLs limits the amount of service time for which an assembly line might need to be shut down. The '392 patent claims a connecting structure wherein one side of the structure can be pivoted in and out of its operating position. Figures 1 and 4 show the preferred embodiment of the '392 patent:



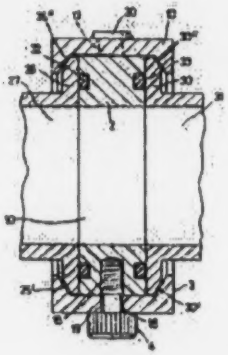


Fig. 4

Figure 4 depicts a connecting structure as it connects two FRL units having outlet ports (27 and 31) and flanges (26 and 30). The parties and the ALJ refer to the vertical portions of the flanges as projecting rims, and we will do the same. Figure 1 is an exploded view of the connecting structure. The rectangular spacer (2) slides into the u-shaped member (1) along channels (5, 6, and 7), with elongated member (3) in the raised position. The projecting rims of the flanges slide in between the spacer and the channel walls. The elongated member is then lowered and bolted closed. The primary issue on appeal—claim construction—focuses on the projecting rims of the flanges.

DISCUSSION

Norgren filed a complaint with the ITC in which it alleged violations of section 337 in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain SMC connecting structures that allegedly infringe claims 1–5, 7, and 9 of the '392 patent. The ALJ held an administrative trial, received post-hearing briefing from the parties, and then issued an initial determination in which he concluded that there was no violation of section 337. More specifically, the ALJ found that the accused SMC connecting structures do not infringe the asserted claims because they do not meet the claim limitation of "a four-sided generally rectangular clamp adapted, in its operative clamping position, to engage, in parallel relationship with one another, the pair of ported flanges." The ALJ also determined that the asserted claims of the '392 patent are nonobvious. The ITC decided not to review the initial determination and terminated the investigation with a finding of no violation.

Norgren appeals, challenging the ALJ's claim construction. Both the ITC (as appellee) and SMC (as intervenors) respond that the ALJ's finding of noninfringement was correct because the underlying claim construction was correct. SMC also argues that the ALJ erred in concluding that the asserted claims are not invalid for obviousness. We have jurisdiction under 28 U.S.C. § 1295(a)(6).

We review claim construction de novo. Gemstar-TV Guide Int'l, Inc. v. Int'l Trade Comm'n, 383 F.3d 1352, 1360 (Fed. Cir. 2004); see also Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1455–56 (Fed. Cir. 1998) (en banc). Independent claim 1 of the '392 patent recites as follows:

> 1. Connecting structure for contiguously connecting together a pair of fluid-flow elements, each fluid flow element including a generally rectangular ported flange so as to define a pair of ported flanges associated with the fluid-flow elements, said connecting structure comprising:
>
> a four-sided, generally rectangular clamp adapted, in its operative clamping position, to engage, in parallel relationship with one another, the pair of ported flanges, one of said sides of the clamp being pivotally mounted so that said one side can be pivoted out of said operative clamping position in order to permit reception of said flanges into the clamp and then pivoted back into said operative clamping position,

> sealing means for establishing fluid-tight communication between the respective ports formed in said flanges, and
>
> locking means for releasably locking said one side in said operative clamping position, in which position the clamp urges the flanges towards one another thereby establishing together with said sealing means, said fluid-tight communication between said ports.

Because this claim recites a "clamp adapted . . . to engage . . . the pair of ported flanges," the parties agree that we must construe "generally rectangular ported flange," which appears in the preamble of claim 1, insofar as the flange is configured to permit engagement by the clamp. The ALJ explained, "whether or not the flange on an FRL must have two or four . . . rims is the salient issue to be determined." The ALJ stated:

> the word "flange," as used in the claims of the '392 patent, is the structure that is received into the claimed clamp, and further that "a generally rectangular ported flange" is a flange of rectangular shape with projections on all four sides and a hole in the middle that is used as a port.

The ALJ further explained:

> In view of the fact that the clamp must be four-sided, and the clamp is specially adapted to engage the generally rectangular ported flanges of the FRLs, it is reasonable to conclude that each rectangular flange is engaged on all four of its sides by the four-sided clamp. Thus, the clamp is adapted to engage flanges with four projecting rims.

Norgren argues that the ALJ's claim construction is erroneous for requiring that each flange has projections (or projecting rims) on all four sides.[1] We agree.

Nothing in the claims, written description or prosecution history requires four projecting rims. The claims of the '392 patent do not recite the terms "rim" or "projection." Indeed the term "rim" does not appear anywhere in the '392 patent. The specification refers to two items as projections—the hook attached to the rectangular spacer and a ridge in another embodiment of the u-shaped member—neither of which are present on the flanges or relate

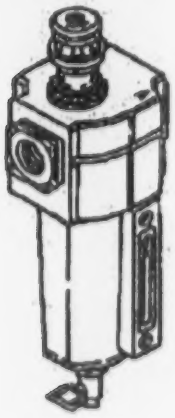
---

[1] In its briefs, Norgren also maintained that the ALJ's claim construction incorrectly requires that the entire flange be received into the clamp. At oral argument, however, counsel for Norgren and counsel for SMC conceded that for the SMC accused structures, flanges do not extend beyond the clamp. Oral Argument Tr. 9:07–11:46 (Norgren), 35:08–36:47 (SMC). In other words, the accused SMC connecting structures permit reception of two flanges entirely into the clamp. Accordingly, we do not address this issue.

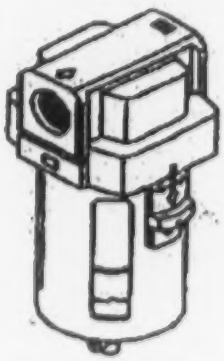
to the flanges in any way. See '392 patent col.2 l.62, col.3 l.1, col.4 l.19. It is true that the figures of the '392 patent depict a preferred embodiment that includes two flanges, each with four projecting rims. See id. figs.3 & 4. But these figures are the full extent to which the patent refers to flanges with four projecting rims. Thus under the well-established prohibition on importing limitations from the specification into the claims, see Phillips v. AWH Corp., 415 F.3d 1303, 1320, 1323, the "generally rectangular ported flange" of the asserted claims of the '392 patent is not limited to a flange having four projecting rims.

The "generally rectangular" language pertains to the overall shape of the flange. The figures below depicting the Norgren and SMC flanges attached to the FRLs show that each is generally rectangular. The subsequent Figures show just the two flanges. The dotted lines indicate the projections (rims). The SMC device has two, the Norgren device four.

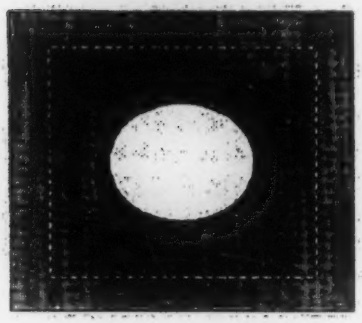
A Generally Rectangular Ported Flange



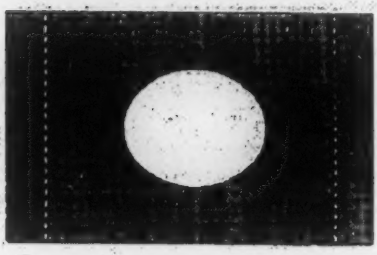
SMC's Mounting Ears



Norgren
Generally Rectangular
Ported Flange



SMC
Mounting Ears



SMC Br. 23–24. The claim limitation "rectangular" is satisfied by the overall shape of the flange and does necessitate four rims. The "ported" language indicates that the flange have a port or hole in the center for the passage of fluid. This cannot be the source of the four rims limitation. That leaves the word "flange." Neither party is suggesting that one of ordinary skill in the art would understand the word flange alone to necessitate four rims. Although the word flange necessarily calls to mind a protrusion, rim or projection, nothing in the specification of the '392 patent suggests that the claimed flange must always include four rims. A "generally rectangular ported flange" is a generally rectangular projection with a hole for fluid passage. Norgren admitted, however, that the flange must have "sufficient projecting rims for the clamp to function." See Initial Determination at 18. But this does not require four rims.

Although it is possible for a four-sided, generally rectangular clamp to engage each generally rectangular flange on all four sides, nothing in the claims or the rest of the specification requires that every side contain a rim. For these reasons, the ALJ's construction is erroneous as it reads a limitation into the claims.

It is undisputed that the accused SMC structures are ported and generally rectangular. The accused SMC structures have two "mounting ears," i.e., two projecting rims. Applying the correct claim construction of "generally rectangular ported flange" to the undisputed facts, we reverse the noninfringement determination of the ITC.

Lastly, SMC asserts that we could affirm the ITC determination of no violation by concluding that the ALJ erred in concluding that the '392 patent is nonobvious. We believe, however, that the ALJ should evaluate obviousness in the first instance under the correct construction of "generally rectangular ported flange"—i.e., a construction that does not require a flange having projections on all four sides.

CONCLUSION

In light of the change to claim construction, we reverse the ITC's determination of noninfringement, vacate the ITC's determination of nonobviousness, and remand.

Appendix B

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of **Certain-Connecting Devices ("Quick-Clamps") for Use with Modular Compressed Air Conditioning Units, Including Filters, Regulators, and Lubricators ("FRL's") That Are Part of Larger Pneumatic Systems and the FRL Units They Connect**	**Investigation No. 337-TA-587**

NOTICE OF COMMISSION DECISION NOT TO REVIEW AN INITIAL DETERMINATION OF THE ADMINISTRATIVE LAW JUDGE FINDING NO VIOLATION OF SECTION 337; TERMINATION OF THE INVESTIGATION

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined not to review an initial determination ("ID") issued by the presiding administrative law judge ("ALJ") determining that there is no violation of section 337 of the Tariff Act of 1930.

FOR FURTHER INFORMATION CONTACT: Mark B. Rees, Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-3116. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server at *http://www.usitc.gov*. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at *http://edis.usitc.gov*. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on November 13, 2006, based on a complaint filed by Norgren, Inc. ("Norgren") of Littleton, Colorado. 71 *Fed. Reg.* 66193 (Nov. 13, 2006). An amended complaint was filed on October 25, 2006. A supplement to the complaint was filed on November 1, 2006. The amended complaint alleged violations of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain devices for modular compressed air conditioning units and the FRL units they connect by reason of infringement of claims 1-9 of U.S. Patent No. 5,372,392 ("the '392

patent"). The amended complaint also alleged that a domestic industry exists with regard to the '392 patent under subsection (a)(2) of section 337. The amended complaint named SMC Corporation of Japan; SMC Corporation of America of Indianapolis, Indiana (collectively, "SMC"); AIRTAC of China; and MFD Pneumatics ("MFD") of Chicago, Illinois as the respondents and requested a limited exclusion order and a cease and desist order. On July 13, 2007, the Commission determined not to review an ID terminating the investigation with respect to MFD and AIRTAC on the basis of a consent order stipulation and consent order.

On February 13, 2008, the ALJ issued his final ID finding no violation of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337). Specifically, the ALJ found that there had been an importation of SMC's accused products and that none of the accused products infringe the asserted claims of the '392 patent. He also found that the asserted claims are not invalid due to obviousness. He further found that Norgren satisfies the domestic industry requirement with respect to the '392 patent. On February 25, 2008, the ALJ issued a recommended determination on remedy and bonding in the event the Commission reversed his finding of no violation of section 337.

On February 25, 2008, Norgren and SMC each filed a separate petition for review of the ID. The Commission Investigative Attorney ("IA") did not file a petition for review. On March 3, 2008, Norgren and SMC filed responses in opposition to each other's petitions for review, and the IA filed her response in opposition to both petitions.

On March 5, 2008, the Commission determined to extend the deadline for determining whether to review the ID by 14 days, *i.e.*, until April 14, 2008.

Having examined the record of this investigation, including the ALJ's final ID and the submissions of the parties, the Commission has determined not to review the ALJ's determination and has terminated this investigation with a finding of no violation.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), and in section 210.42-45 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.42-45).

By order of the Commission.

/s/

Marilyn R. Abbott Secretary to the Commission

Issued: April 14, 2008

Appendix C

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of **Certain Connecting Devices ("Quick-Clamps") for Use with Modular Compressed Air Conditioning Units, Including Filters, Regulators, and Lubricators ("FRL's") That Are Part of Larger Pneumatic Systems and the FRL Units They Connect**	**Investigation No. 337-TA-587**

INITIAL DETERMINATION
Administrative Law Judge Carl C. Charneski

Pursuant to the notice of investigation, 71 Fed. Reg. 66193 (2006), this is the Initial Determination in the matter of *Certain Connecting Devices ("Quick-Clamps") for Use with Modular Compressed Air Conditioning Units, Including Filters, Regulators, and Lubricators ("FRL's") That Are Part of Larger Pneumatic Systems and the FRL Units They Connect,* United States International Trade Commission Investigation No. 337-TA-587. *See* 19 C.F.R. § 210.42(a).

It is held that no violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, has

occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain connecting devices for use with modular compressed air conditioning units, including filters, regulators, and lubricators ("FRL's") that are part of larger pneumatic systems and the FRL units they connect by reason of infringement of one or more of claims 1 through 9 of United States Patent No. 5,372,392.

The following abbreviations may be used in this Initial Determination:

ALJ	-	Administrative Law Judge
ALJX	-	Administrative Law Judge Exhibit
CDX	-	Complainant's Demonstrative Exhibit
CPX	-	Complainant's Physical Exhibit
CX	-	Complainant's Exhibit
Dep.	-	Deposition
EDIS	-	Electronic Document Imaging System
FF	-	Finding(s) of Fact
JPX	-	Joint Physical Exhibit
JX	-	Joint Exhibit
PCL	-	Proposed Conclusion of Law (CPCL, RPCL or SPCL)
PFF	-	Proposed FF (CPFF, RPFF or SPFF)
PRF	-	Proposed Reply or Rebuttal Finding (CPRF, RPRF or SPRF)
RDX	-	Respondents' Demonstrative Exhibit
RPX	-	Respondents' Physical Exhibit
RX	-	Respondents' Exhibit
SX	-	Commission Investigative Staff Exhibit
Tr.	-	Transcript.

* Table of Contents omitted for printing

I. BACKGROUND

A. Institution and Procedural History of This Investigation

By publication of a notice in the *Federal Register* on November 13, 2006, pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, the Commission instituted this investigation with respect to U.S. Patent No. 5,372,392 ("the '392 patent") to determine:

> [W]hether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain devices for modular compressed air conditioning units and the FRL units they connect by reason of infringement of one or more of claims 1-9, and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

71 Fed. Reg. 66193 (2006).[1]

Norgren, Inc. ("Norgren") of Littleton, Colorado is the complainant. The respondents named in the complaint were: SMC Corporation of Tokyo, Japan and SMC Corporation of America of Indianapolis, Indiana (collectively, "SMC"); AIRTAC of Ningbo, China; and MFD Pneumatics of Chicago, Illinois. The Commission Investigative Staff ("Staff") of the

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[1] As discussed, *infra*, only claims 1-5, 7, and 9 of the '392 patent are asserted to be infringed.

Commission's Office of Unfair Import Investigations is also a party in this investigation. *Id.*

AIRTAC and MFD Pneumatics were terminated from this investigation on the basis of consent orders. *See* Order No. 7 (Initial Determination), Notice of Commission Decision Not to Review (July 13, 2007). Thus, the SMC companies are the only respondents remaining in this investigation.

The evidentiary hearing on the question of violation of section 337 commenced on November 27, 2007, and concluded on November 29, 2007. All parties, *i.e.*, Norgren, SMC and the Staff, were represented at the hearing. Hearing Tr. 21-772.

B. The Products at Issue

This investigation pertains to products used in the compressed air and pneumatics industry. In particular, this investigation concerns "connecting devices" used to connect filters, regulators or lubricators installed in compressed air systems, typically in assembly line type manufacturing applications. In the industry, and during this investigation, *filters, regulators* and *lubricators* are commonly referred to as "FRLs." *See, e.g.*, Norgren Br. at 21-23; SMC Br. at 1-4; Staff Br. at 3.[2] While FRLs are prominently featured by the parties, it is

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[2] The benefits of FRLs are generally as follows: a "filter" rids pollutants, such as water, from the compressed air system; a "regulator" reduces the amount of compressed air appropriate for the specific process; and a "lubricator" injects lubrication into the air flow to protect the air tools from pollutants. *See* Wiskamp Tr. 238-240; Kuchta Tr. 503.

important to keep in mind the fact that the focus of this investigation is upon the connecting devices by which the FRLs are attached to the compressed air systems. *See* p. 10 (Figs. 1 & 2), *infra,* for an illustration of a connecting device; *see also,* p. 11, *infra,* (for illustration of an FRL).

Norgren accuses SMC's more recently designed FRL connectors, referred to as "new style" connectors, of infringing the '392 patent.[3] Norgren argues that SMC's FRLs also infringe the patent, as do pneumatic systems that incorporate SMC's accused connectors and FRLs. Norgren Br. at 21. There is disagreement among the parties as to whether any accused SMC connector infringes the '392 patent, and whether the '392 patent can be construed to cover FRLs and all the possible types of compressed air systems accused by Norgren. There is also disagreement as to the range of downstream products, if any, that should be included in any exclusion order that might issue. *See, e.g.,* Staff Br. at 27-28; SMC Br. at 10-16.[4] Nevertheless, the three specific categories of products put in issue by Norgren are the following:

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[3] Older-style connectors are still manufactured by SMC. *See* Kuchta Tr. 532. They are not, however, the subject of Norgren's case. *See, e.g.,* Norgren Br. at 21; Wiskamp Tr. 331.

[4] The scope of any exclusion order that should issue as a result of this investigation, including the possible exclusion of downstream products, shall be discussed in the Recommended Determination on remedy to issue pursuant to 19 C.F.R. § 210.42(a)(1)(ii).

> (1) SMC's "new style" connectors with at least the following model numbers (Y100, Y100T, Y200, Y200T, Y300, Y300T, Y400, Y400T, Y500, Y500T, Y600 and Y600T), and which may be exemplified by the SMC Y400;
>
> (2) SMC FRLs; and
>
> (3) "Additional Downstream Products," identified as [e]very larger pneumatic system that incorporates the SMC connector and FRLs."

Norgren Br. at 21-23.

There is no dispute that for the purposes of this investigation, the "new style" SMC connectors do not differ materially from each other. *See, e.g.,* Norgren Br. at 21 (illustrating an SMC Y400 as representative of the accused connectors); Staff Br. at 26 & n.7 (referring to the SMC Y400 as representative, and noting the similarity of the SMC connectors, except for the Y100 which has only "a slightly different configuration for the sealing means").

II. IMPORTATION OR SALE

The importation or sale requirement of section 337 has not been contested. Thus, it is found that SMC sells for importation, imports and, or, sells after importation articles accused in this investigation. The importation or sale requirement of section 337 is satisfied.

Indeed, the record evidence shows that SMC manufactures the accused connectors and FRLs in Japan and China, and then imports them into the United States by selling them to its United States subsidiary. Although occasionally SCM attaches connectors to FRLs prior to importation, SMC usually brings the components into the United States in their individual state. Thereafter, combinations of FRLs and connectors are usually made in this country by SMC, distributors or customers. Kuchta Tr. 536; Pusateri Tr. 551, 554-556.

In addition, Norgren cites an admission by SMC that other companies not named as respondents (*i.e.*, Nippei Toyama Corp., Makino Milling Machine Co., Ltd., Mitsui Seiki Kogyo Co., Ltd., Tsugami Corp., Okuma Corp., Yamazaki Mazak Corp., Mori Seki Co., Ltd., and Fanuc Ltd.) may ship both its older version connectors, and its newer (accused) version connectors into the United States either alone, or as part of a "larger product." The details of those products are not specified in the record. *See* CX-143 (Interrog. Responses), SMC Resp. No. 31; Kuchta Tr. 534 535.[5]

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[5] Norgren relies on no evidence other than that cited above, and the fact that no contrary evidence was presented during the hearing. *See* Norgren Br. at 3, 53; *see also* CPFF 12.3 ("SMC's FRLs are present in larger OEM (Original Equipment Manufacturer) equipment. Kuchta Tr. 534-535"); Kuchta Tr. 534-535 (In this context, "a larger machine that contains some series of FRL components" is "any industrial automated machine that uses compressed air.").

III. CLAIM CONSTRUCTION

This investigation is based on Norgren's allegation that certain products manufactured and, or, sold by SMC infringe one or more specified claims of Norgren's United States Patent No. 5,372,392. *See* JX-1. The claims of the patent are subject to numerous corrections contained in the Certificate of Correction (dated Dec. 13, 1994 and issued Apr. 11, 1995), included in JX-1. A copy of the patent's prosecution history is marked as JX-2.

A. Applicable Law

Pursuant to the Commission's notice of investigation, this is a patent-based investigation. *See* 71 Fed. Reg. 66193 (2006). Accordingly, all of the unfair acts alleged by Norgren to have occurred are instances of alleged infringement of the '392 patent. Any finding of infringement or non-infringement requires a two-step analytical approach. First, the asserted patent claims must be construed as a matter of law to determine their proper scope.[6] Second, a factual determination must be made as to whether the properly construed claims read on the accused devices. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995)(*en banc), aff'd,* 517 U.S. 370 (1996).

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[6] Only those claim terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *Vanderlande Indus. Nederland BV v. Int'l Trade Comm.*, 366 F.3d 1311, 1323 (Fed. Cir. 2004); *Vivid Tech., Inc. v. American Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

Claim construction begins with the language of the claims themselves. Claims should be given their ordinary and customary meaning as understood by a person of ordinary skill in the art, viewing the claim terms in the context of the entire patent. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006). With respect to claim preambles, the Court of Appeals for the Federal Circuit has explained that:

> [A] claim preamble has the import that the claim as a whole suggests for it. In other words, when the claim drafter chooses to use both the preamble and the body to define the subject matter of the claimed invention, the invention so defined, and not some other, is the one the patent protects.

Eaton Corp. v. Rockwell Int'l Corp., 323 F.3d 1332, 1339 (Fed. Cir. 2003) (quoting *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620 (Fed. Cir. 1995)).

In some instances, claim terms do not have particular meaning in a field of art, and claim construction involves little more than the application of the widely accepted meaning of commonly understood words. *Phillips*, 415 F.3d at 1314. In such circumstances, general purpose dictionaries may be helpful. In many cases, claim terms have a specialized meaning, and it is necessary to determine what a person of skill in the art would have understood disputed claim language to mean, by analyzing the words of the claims themselves, the

remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, as well as the meaning of technical terms, and the state of the art. *Id.* (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)).

In cases in which the meaning of a claim term is uncertain, the specification usually is the best guide to the meaning of the term. *Id.* at 1315. As a general rule, the particular examples or embodiments discussed in the specification are not to be read into the claims as limitations. *Markman,* 52 F.3d at 979. However, the specification is always highly relevant to the claim construction analysis. The specification is usually dispositive. It is the single best guide to the meaning of a disputed term. *Phillips,* 415 F.3d at 1315. Moreover; "[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Id.* at 1316.

If the intrinsic evidence does not establish the meaning of a claim, then extrinsic evidence may be considered. Extrinsic evidence consists of all evidence external to the patent and the prosecution history, including inventor testimony, expert testimony and learned treatises. *Id.* at 1317. Inventor testimony can be useful to shed light on the relevant art. In evaluating expert testimony, a court should discount any expert testimony that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent. *Id.* at 1318. Extrinsic evidence

may be considered if a court deems it helpful in determining the true meaning of language used in the patent claims. *Id.*

B. The '392 Patent

The '392 patent, which is entitled "Connecting Devices," issued to Myron Dunn, Kevin T. Dickson, and Urs T. Moeker on December 13, 1994, based on an application filed on June 24, 1993. JX-1; JX-2. None of the listed inventors was called as a witness during the hearing.

As described in the '392 patent specification, the field of the claimed invention "relates to devices for connecting together fluid flow elements, especially but not exclusively fluid-conditioning units, such as, for example, pressure regulators, filters and lubricators for use in compressed air systems." JX-1, col. 1, ll. 6-10. With respect to the prior art, the patent explains:

> As is well-known, a compressed air pipeline usually includes, intermediate the air compressor and a point of use, a plurality of conditioning units through which the compressed air sequentially passes. Depending on the circumstances, there will usually be two or more such units positioned adjacent to one another. For example, a typical arrangement might comprise a bank of three units, namely a filter, regulator and lubricator. In any event, it is known to provide "modular" units, and means for connecting them,

> whereby any number of units, as desired, may be readily connected together and into the compressed air pipeline so that the air will pass though them in the desired sequence, for example through a filter, pressure regulator and lubricator, in that order. Several connecting means have over the years been developed and commercialized but, whilst technically satisfactory, many have been relatively expensive to produce and/or have consisted of loose parts that have to be assembled by the user, some of which are susceptible to being lost.

Id., col. 1, ll. 12-31. Thus, the patent states, it "is an object of the present invention to provide a simple, relatively inexpensive, preferably unitary connecting means for sealingly connecting together fluid flow elements which permits ready disconnection of the elements when desired." *Id.*, col. 1, ll. 32-36 (Background of the Invention).

To summarize the claimed invention, the specification states:

> In its broadest aspect, the present invention provides connecting means for contiguously connecting together a pair of fluid-flow elements, said means comprising a four-sided, generally rectangular clamp adapted, in its operative clamping position, to engage, in parallel relationship with one another, a pair of ported flanges associated respectively with said elements and further

comprising sealing means for establishing fluid-tight communication between the respective ports formed in said flanges, one of said sides of the clamp being pivotally mounted so that said one side can be pivoted out of said operative clamping position in order to permit reception of said flanges into the clamp and then pivoted back into said operative clamping position, and locking means to lock said one side in said operative clamping position.

In a preferred embodiment, the sealing means comprises a rectangular, plate-like spacer having a fluid flow bore extending through it between its two major faces, the bore being about the same diameter as the ports in said flanges, and the spacer is located centrally within the generally rectangular clamp by, for example, one or more screws or rivets. Each major face of the spacer has a sealing surface circumscribing the opposite extremities of the bore and each sealing surface may support, for example in an annular groove, an O-ring seal. In such preferred embodiment, the locking means preferably comprises a screw or bolt held captive by the pivotally mounted side of the clamp and which can be screwed to tightness into a threaded bore formed in the spacer or in an adjacent side of the clamp. Preferably, the said one side of the clamp is pivotally mounted on the spacer or on an adjacent

> side of the clamp by means of a hinge-like mounting.
>
> Accordingly, it will be appreciated that the connecting means of the invention may be a unitary structure in the sense that it has no loose parts that might otherwise get lost by the user.

Id. col. 1, l. 39 through col. 2, l. 8 ("Summary of the Invention").

Various aspects of the preferred embodiments are illustrated in the '392 patent specification, including Figure 1 and Figure 2, reproduced below. Figure 1 is described as "a perspective view, in exploded form, of a connecting means constructed in accordance with the invention." Figure 2 is "a cross-section on the line II - II of Fig. 1." JX-1, col. 2, ll. 14-17. While this illustration does not depict the entire scope of the patent claims, it is helpful in understanding the nature of the connecting devices covered by the patent.

Fig. 1

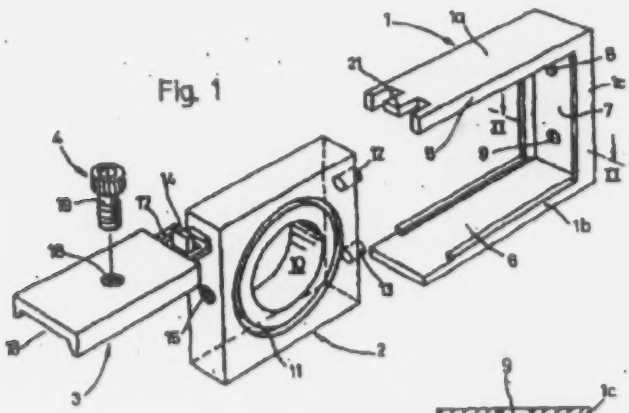
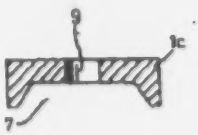


Fig. 2



Similarly, one may obtain a visual representation of how the preferred embodiment of the claimed connecting device might connect a compressed air filter unit and a compressed air lubricator unit by referring to the specification's Figure 3, which is reproduced below, in which diagram **22** represents an air filter unit, and diagram **23** represents an air lubricator unit. *See* JX-1, col. 2, ll. 18-21, col. 3, ll. 21-24.

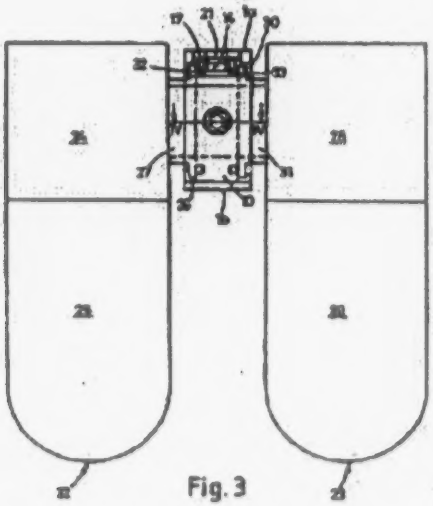


Fig. 3

C. <u>One of Ordinary Skill in the Relevant Art</u>

As discussed in the background and summary portions of the specification (quoted above), the subject matter of the '392 patent encompasses the engineering of a mechanical device, as well as its practical and common application in the compressed air industry in 1993.

With respect to the question of one of ordinary skill in the art relevant to the claims of the '392 patent, Norgren discounts the need for a bachelor's degree. Rather, it submits that "[o]nly a person with a deep understanding of the FRL industry at the time of the invention would know what these claim terms meant in that industry and only such a person would have the proper perspective to know what would have been obvious to engineers designing devices for the industry at the time." Norgren Br. at 8. (Norgren apparently is referring to its non-degreed expert, John Wiskamp. *See* Tr. 209-210.) Norgren further submits, "Of much greater importance is experience in the FRL and pneumatics industry at the time of the invention allowing one to understand the market demands, product performance and design requirements." *Id.*

Accordingly, Norgren proposes that a person of ordinary skill in the art relevant to the '392 patent is "a person with several years of experience in the pneumatics and air preparation (FRL) fields, with specific experience in the design and development of commonly used FRL product lines such as the Excelon and Quik Clamp products lines." Norgren Br. at 8.[7]

SMC argues that a "person of ordinary skill in the art to which the '392 patent is directed would have a bachelors degree in engineering and two to

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[7] Excelon and Quik Clamp are Norgren products that were developed in the early 1990s. Wiskamp Tr. 224-225; Robertson Tr. 44-47. In fact, the Quik Clamp (interchangeably referred to as a Quick-Clamp) is the connecting device that is the subject of the '392 patent at issue in this investigation.

four years of industry experience." SMC Br. at 12. (SMC apparently is referring to the accomplishments of its own expert, Dr. David Trumper. *See* Tr. 596-598.)

The Staff believes that both Norgren and SMC are partly correct. Staff submits that one of ordinary skill in the art "should have either (1) several years of experience in the FRL industry (essentially Norgren's position) or (2) an engineering degree with two years of industry experience (essentially SMC's position)." Staff Reply Br. at 1-2 n.1.[8]

In determining the level of ordinary skill here, Staff points out that the person who designed the accused SMC connectors holds an engineering degree, while the inventors listed on the '392 patent, who concurrently designed Norgren's Quik Clamp product, include both engineers and non-engineers. Staff also bases its analysis on Norgren's admission during the pre-hearing phase of this investigation that the technology at issue is "simple." *Id.*

The record in this investigation, including the specification of the '392 patent, shows that one of ordinary skill in the art relevant to the '392 patent would have a thorough understanding of how FRLs are connected in a compressed air pipeline, and would

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[8] Staff submits that in determining the level of skill in the art, a court looks at six factors: "(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field. *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696 (Fed. Cir, 1983)." Staff Reply Br. at 1 n.1.

understand engineering concepts sufficiently to design a workable connector for such FRLs. The evidence shows that in 1993, one could have acquired such ordinary skill through education, practical industry experience, or both. *See* Wiskamp Tr. 216-220, 224-225, 750-752; Trumper Tr. 600. Consequently, one of ordinary skill in the relevant art in 1993 would have had several years of industry experience working with FRLs and connectors, or would have had an engineering degree with two years of industry experience.

D. The Disputed Claim Terms and Their Proper Construction

Norgren asserts claims 1, 2, 3, 4, 5, 7 and 9 of the '392 patent against SMC in this investigation. *See* Norgren Br. at 23-38. Claim 1 is the only independent claim of the patent. *See* JX-1, col. 4, l. 44 through col. 6, l. 21 (all nine claims of the '392 patent). In its corrected form, claim 1 provides as follows:

> 1. Connecting structure for contiguously connecting together a pair of fluid-flow elements, each fluid flow element including a generally rectangular ported flange so as to define a pair of ported flanges associated with the fluid-flow elements, said connecting structure comprising:
>
> a four-sided, generally rectangular clamp adapted, in its operative clamping position, to engage, in parallel relationship with one

another, the pair of ported flanges, one of said sides of the clamp being pivotally mounted so that said one side can be pivoted out of said operative clamping position in order to permit reception of said flanges into the clamp and then pivoted back into said operative clamping position,

sealing means for establishing fluid-tight communication between the respective ports formed in said flanges, and

locking means for releasably locking said one side in said operative clamping position, in which position the clamp urges the flanges towards one another thereby establishing together with said sealing means, said fluid-tight communication between said ports.

JX-1, col. 4, ll. 44-66 (*see* Certificate of Correction).

The parties' proposed claim constructions differ from one another, and their different interpretations of the claimed invention affect numerous portions of the asserted claims. Nevertheless, upon consideration of all the parties' post-hearing filings, including their reply briefs, it is evident that the relevant infringement, validity and domestic industry issues in this investigation turn upon the proper construction of the following claim terms or limitations, each of which is found in claim 1, *viz.*, (1) "a generally rectangular ported flange," (2) "a four-sided generally rectangular clamp adapted, in its

operative clamping position, to engage, in parallel relationship with one another, the pair of ported flanges" and (3) "pivotally mounted." *See, e.g.*, Norgren Br. at 9; SMC Reply Br. at 1-9; Staff Br. at 1-4. Each of these limitations is discussed in separate sections below.

1. "a generally rectangular ported flange"

As quoted above, the preamble of claim 1 refers to "a generally rectangular ported flange." Norgren argues that because the term "appears in the preamble of the claim and does not breathe life and meaning into the claim . . . [the] FRLs and the corresponding flanges on their sides are not per se limitations of claim 1-8." Norgren Br. at 6, 9 (paraphrasing *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999)). Nevertheless, Norgren concedes that the term must be construed in order to understand other portions of the claims which undisputably do recite limitations on the claimed invention, such as the subsequently required "clamp" that engages the flanges of an FRL. Norgren Br. at 9-10.

Norgren argues that during the hearing its expert, John Wiskamp, testified that a flange was a "connection device," and further that "a person of ordinary skill in the art circa 1993 would understand *flange* to be any general connection feature used to join two faces together." Norgren Br. at 13 (citing Wiskamp Tr. 260-261, 455 (emphasis in original); CPFF 7.2 and 7.2.1).[9] Thus, Norgren proposes the

[9] It is evident that Norgren relies on its expert's testimony to argue that a flange is a structure greater in scope than the

following construction for "a generally rectangular ported flange":

> A rectangular or close to rectangular attachment feature that allows the connector to engage and/or align two FRLs in parallel relationship with each other such that a fluid tight seal is maintained between the respective ports on the FRLs.

Id. at 13.

As seen in Norgren's proposed construction, as well as in portions of the claim preamble, the claimed connector engages the flanges of two separate FLRs so as to align them in parallel. It is not disputed that the claimed connector must accommodate a "port" or hole that allows fluid (such as compressed and treated air which is often called a "fluid" in the art) to flow from one FLR to another after the FLRs have been aligned. Nor is it disputed by any party that the alignment and creation of a fluid-tight seal is performed by means of a clamp that is expressly required by the body of the claim (and which is discussed in detail below). Consequently, Norgren expressly admits that the "rectangular attachment feature," which it identifies as a "flange," *"includes sufficient projecting rims for the clamp to function,* it

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projecting rims. However, Norgren's argument that a flange is separate from the claimed connecting device (an argument with which this Tribunal happens to concur) is not advanced by its own expert's testimony which, as summarized in Norgren's brief and also quoted *supra,* was to the effect that a flange is in fact a "connection device." *See* Norgren Br. at 13.

is rectangular, and it has a port." Norgren Br. at 15 (emphasis added).

Norgren does not admit that the projecting rims themselves constitute a flange or flanges. Rather, Norgren argues that to equate the projecting rims with the flanges recited in the preamble of the claim would require an improper reliance on excerpts from the specification's description of the preferred embodiment, would contradict statements made on behalf of the applicants during prosecution, and would be contrary to admissions made by SMC's expert (Dr. Trumper) during the hearing. *Id.*

It further argues that equating the projecting rims of the flange with the flange itself would make little sense when one considers the devices at issue and the function they are designed to accomplish. In particular, complainant asserts:

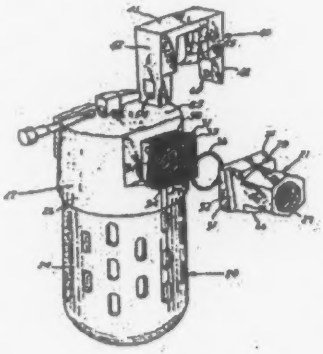
> It would make no sense that the rims themselves are either rectangular or ported as it would serve no purpose in the claimed invention or in any of the embodiments disclosed within the patent. If the flanges are rims or edges as SMC argues, they would not have holes or ports in them as needed to accomplish the invention claimed in the patent.

Norgren Br. at 15.

Norgren's brief contains a depiction of a device that allegedly exhibits "a generally rectangular ported flange," according to its proposed construction. In that regard, Norgren argues that during the

hearing, SMC's expert witness (Dr. Trumper) referred to a portion of a prior art device depicted in RX-20 (the patent to "Ribble") as containing such a flange. According to Norgren, Dr. Trumper testified that the so-called flange was not restricted to the projecting rims themselves (called "wedges" in Ribble), and that the flange in question had only two projecting rims (or "wedges"), not four. Norgren Br. at 13-14. (As discussed, *infra,* SMC takes issue with Norgren's characterization of Dr. Trumper's testimony.)

The Figure at right from the Ribble specification (and Norgren's brief), highlighted by Norgren to exemplify "a generally rectangular ported flange," is illustrative of complainant's argument. *See* Norgren Br. at 14.



Norgren states that the reason SMC's expert "could testify that such a structure is a flange – indeed a generally rectangular ported flange – is because that structure is just that: generally rectangular, ported, and an attachment feature that allow[s] the connector to engage and/or align two FRLs." *Id.* Indeed, Norgren argues, that inasmuch as patent claims are not bound by the preferred embodiments of the specification, "the generally rectangular ported flanges that the clamp is adapted to engage in the claims can not *require* the flanges to

have any projecting rims, let alone four projecting rims." *Id.* at 12 (emphasis in original). This statement appears to conflict with another that is also contained in Norgren's brief, and which is quoted above, to the effect that the flange must have "sufficient projecting rims for the clamp to function." *See* Norgren Br. at 15.

In any event, it is clear Norgren argues that the flange referred to in the preamble of claim 1 may have either four projecting rims (as in a described in the preferred embodiment) or two such rims (as illustrated in the prior art Ribble patent), and possibly Norgren may be arguing that the flange could have no projecting rims at all. In this investigation, all prior art cited against the '392 patent has a rim or rims, or similar features; and all accused devices, and all devices used to establish a domestic industry have two or four projecting rims. Thus, whether or not the flange on an FRL must have two or four such rims is the salient issue to be determined.

SMC argues that "'a generally rectangular ported flange' should be construed to mean a flange of rectangular shape with projections on all four sides and a hole in the middle that is used as a port." SMC Br. at 13, 16.[10] Thus, in contrast to Norgren's proposed construction, SMC would require rims

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[10] SMC provides a representation of such a flange in RDX-1 (illustration on the left portion of the exhibit), which is reproduced in its brief at page 27. RDX-1 also contains a representation of part of an accused device (illustration on the right), which is not relevant to the claim construction issue.

projecting from all four sides of the flange. While SMC's proposed construction of this term is not as broad as Norgren's, it should be noted that contrary to Norgren's concerns about SMC's proposed construction, SMC does not limit its construction of "flange" to projecting rims. Rather, SMC views the rims as projecting from the larger flange structure.

SMC argues that the specification of the '392 patent does not impart any special meaning to the claim term "a generally rectangular ported flange." Nevertheless, SMC also argues that one cannot disregard the specification, and in this case, the embodiments of the specification consistently depict in figures, and describe in words, a generally rectangular flange with rims projecting on all four sides, as well as a four-sided clamp that receives the rims projecting from all four sides of the flange. SMC Br. at 13-14.

In addition, SMC submits that, *as* stated by its expert, Dr. Trumper, one of ordinary skill would understand a generally rectangular ported flange to be rectangular with rims projecting on all four sides with a hole in the middle. *Id.* at 14, citing Trumper Tr. 601. In SMC's view, such a claim construction "stays true to the claim language, and most naturally aligns with the patent's description of the invention." *Id.* (citing *Phillips,* 415 F.3d at 1316; *SafeTCare Mfg. Co. v. Tele-Made, Inc.,* 497 F.3d 1262, 1269-70 (Fed. Cir. 2007)(specification relied on to understand what the patentee had claimed and disclaimed)).

SMC further submits that Norgren mischaracterizes Dr. Trumper's testimony regarding

the prior art Ribble patent (RX-20). SMC argues that Dr. Trumper did not testify that this prior art discloses a generally rectangular ported flange as described in the claim preamble. Rather, Dr. Trumper testified that Ribble discloses a three-sided clamp, and "[i]f you wanted to add a flange projecting rim on the top and bottom of Ribble and then add a fourth side that hinges, all of those would be standard mechanical design choices." SMC Reply Br. at 5 (quoting Trumper Tr. 621).[11]

SMC also argues that its proposed claim construction is consistent with arguments made on behalf of applicants during patent prosecution in which Norgren amended the claims to restrict each fluid-flow element so as to include "a generally rectangular ported flange." Thus, it is asserted that Norgren cannot now argue that the term, "a generally rectangular ported flange", covers flanges that are not

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[11] Dr. Trumper may have misspoken during the hearing, or if not, perhaps SMC should have moved to correct the transcript. However, the quotation, *supra,* from the hearing testimony of Dr. Trumper accurately reflects the official transcript which indicates that he said "top and bottom," rather than "top or bottom" as stated in SMC's reply brief.

In any event, it is clear from the transcript that while Dr. Trumper did refer to the Ribble embodiment as having a sort of a flange, contrary to Norgren's characterization of his testimony, he did not say that Ribble disclosed a flange such as that referred to in claim 1. More particularly, as part of the same testimony on the issue of alleged obviousness, Dr. Trumper explained how one would have to modify the Ribble clamp in order for it to have a "four-sided generally rectangular shape." *See* Trumper Tr. 620-621.

rectangular or are not ported. SMC Br. at 15 (citing *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323-28 (Fed. Cir. 2003)(holding that claim cannot be construed to encompass subject matter that patentee disavowed during prosecution to obtain allowance)). SMC further submits that its proposed claim construction is consistent with the position taken by Norgren in connection with the domestic industry issue to the effect that Norgren's own "Quik Clamp" connector, which engages four projecting rims, practices the patent. *Id.*

Finally, SMC argues that one should ignore Norgren's position that "a generally rectangular ported flange" is not a claim limitation due to its placement in the claim preamble inasmuch as reference to the flange occurs four times in the body of claim 1. *Id.* at n.4. Thus, both Norgren and SMC argue that the term "a generally rectangular ported flange" must be construed, albeit for different reasons.

The Staff proposes that a "generally rectangular ported flange" should be construed as "a flange having a rectangular or close to rectangular shape with projections on all four sides with an opening in the middle." Staff Br. at 7.[12] Although later portions

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[12] The term "middle" as used by SMC and the Staff has not been placed in contention. No precise definition of the term is proposed by any party. It appears to be at least tacitly agreed by all parties that a port must be provided somewhere within the space delineated by the outer edges of the flange, and by necessity in such a location and in such dimensions so as to accommodate the fluid (compressed air) flowing through the predetermined openings in the FRLs.

of the Staff's brief do refer to flanges as rims, *see, e.g.,* Staff Br. at 9, this definition identifies flanges as comprising projections, as well as a surface that provides an opening in the middle. The Staff bases its proposed construction in large part on the fact that all asserted claims require a four-sided, generally rectangular clamp adapted to engage a pair of the (generally rectangular) flanges at issue. *Id.* at 7-8.

The Staff also argues that SMC has offered a definition that is consistent with evidence intrinsic to the patent, consistent with extrinsic evidence, and consistent with evidence presented at the hearing. Thus, the Staff states that it can concur with SMC's proposed claim construction of this term. *Id.* at 8-9.

In contrast, the Staff argues, Norgren has sought to justify a tenuous infringement position by attempting during the course of this investigation to move away from a "projecting rim" construction of the flange at issue in favor of an "amorphous and generic definition" that "ignores the claim language of claim 1, disregards the '392 patent specification, and moreover conflicts with the plain and ordinary meaning of the term 'flange.'" *Id.* at 8 (citing, *inter alia*, Norgren's Mot. for Partial Summ. Deter., Mot. Dkt. No. 587-10 at 15 (in which Norgren's expert defined a "flange" as a "projecting rim to attach to something else")).

Based on the arguments of the parties, it is evident that all agree that whether the claim term "a generally rectangular ported flange" appears in the preamble of claim 1 by way of explanation, or

whether it is present in the preamble to add a particular limitation to the claimed invention, it must be construed because of the relationship between the flange and the clamp, the latter of which is indisputably a claim limitation. Further, it must be determined what the claim indicates by use of the term "a generally rectangular flange" with particular emphasis on defining the word "flange" which is in dispute. Finally, it must be determined whether or not the generally rectangular flange referred to in the preamble must have four projecting rims.

For the reasons detailed below, it is determined that the word "flange," as used in the claims of the '392 patent, is the structure that is received into the claimed clamp, and further that "a generally rectangular ported flange" is a flange of rectangular shape with projections on all four sides and a hole in the middle that is used as a port.

We begin with the critical inquiry whether "a generally rectangular ported flange" is a claim limitation contained in the preamble of claim. This inquiry is most clearly decided by referring again to the text at issue, which by way of review, is as follows:

> *Connecting structure* for contiguously connecting together a pair of fluid-flow elements, each fluid flow element including a generally rectangular ported flange so as to define a pair of ported flanges associated with the fluid-flow elements, *said connecting structure comprising....*

JX-1, col. 4, ll. 44-48 (emphasis added).

According to the plain language of the preamble, a connecting structure is claimed, and required elements or limitations of which are to follow in the body of the claim. The preamble does, however, set forth the context in which the claimed "connecting structure" is to be used, which is the contiguous connection of a pair of "fluid flow elements" (or FRLs) having certain features. The features of each FLR include "a generally rectangular ported flange" so that when taken together, two FRLs present "a pair of ported flanges.[13] It is undisputed that language found in the body of the claim, particularly the text that recites a clamp adapted for use with the flanges of the FRLs, refers back to this preamble language. However, there is no indication in the plain language of the claim that the flanges on the FRLs are limitations placed on the claimed "connecting structure." In fact, as may be seen from the plain language quoted above, the claimed connector is actually described as a "connecting structure" that is not the same as the "fluid flow elements" (*i.e.*, FRLs) which bear the flanges.[14] It is clear that the

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[13] A "pair" of flanges does not refer to the flanges located on opposite sides of a single fluid flow element. Rather, when the flange on one side of one unit is positioned next to the flange on the side of a second unit, those two flanges located on two units constitute "a pair" of flanges that are to be engaged by the claimed connector.

[14] An argument made by Norgren on behalf of the applicants during prosecution of the '392 patent is not consistent with this fact. Specifically, in order to overcome an indefiniteness rejection of claims 1-8 before the U.S. Patent and Trademark

"connecting structure" is the subject matter claimed by claim 1, and not the FRLs or any of the FRL features.

Inasmuch as limitations contained in the body of the claim interact with the generally rectangular ported flanges of the FRLs described in the preamble, a question is raised as to the meaning of the term "flange." At the outset, it may be noted that two possible issues stand resolved in the parties' brief.

First, no party has confounded the rims that project from a flange with the entirely of the flange itself. In any event, Norgren correctly points out that the claim refers to a "ported flange," and it would make no sense for the projecting rims to have a "port" or hole through which compressed air could flow.[15] Clearly, the "ported flange" referred to in the claim must pertain to a structure greater than projecting rims to be engaged by the clamp.

Office, Norgren made the following argument to the effect that fluid flow elements are not a part of the claimed combination:

> The fluid flow elements and flanges defined in the preamble of claim 1 *are not part of the claimed combination.* The claimed combination provides a clamp, sealing means and locking means for connecting the fluid flow elements.

JX-2 ('392 Prosecution History), May 25, 1994 Amendment, page 4 (emphasis added).

[15] As seen in the summary of the parties' arguments, supra, there is no dispute that the flanges must be "ported," or have a hole, to allow the flow of fluid (most likely treated, compressed air).

Second, the parties do not disagree with respect to the words, "generally rectangular." All agree that a precise definition of "rectangular" or "generally rectangular" is not required by the claim and the art. All also agree that the flange in question need not be perfectly rectangular, and proportions of the sides need not be set forth with specificity.

Nevertheless, SMC and the Staff cannot agree with Norgren on a proper definition of the term "flange." Norgren has, as already mentioned, proposed more than one definition of the term "flange" during the course of this investigation. In a motion for summary determination, Norgren argued that a flange is a "projecting rim to attach to something." *See* Norgren's Mot. for Partial Summ. Deter., Mot. Dkt. No. 587-10 at 15. During the hearing, Norgren's expert, John Wiskamp, testified that after consulting various dictionaries, he learned that the word "flange" can have a number of meanings, but testified that "the jargon for my industry of flange would be the connection device, that which allows a connection to be guided into a connection and the connection to be completed." Wiskamp Tr. 442.

Norgren put forth no other evidence to support or detail such a definition. Moreover, although Wiskamp may have consulted dictionaries to learn the various definitions of "flange," he never consulted the prosecution history of the '392 patent for any purpose whatsoever, a significant short-coming. That Norgren's expert paid no attention whatsoever to the prosecution history, and deemed it irrelevant to the claim construction of the disputed terms, alleged

infringement and patent validity, is demonstrated by the following hearing testimony:

> Q. During your direct testimony, you went through, you described to us what you had done which led to your conclusion of infringement, during this investigation that you made. Did you review the prosecution history of the '392 patent?
>
> A. No, I did not.
>
> Q. Do you know what a prosecution history is?
>
> A. Not necessarily.
>
> Q. Did you have any concern that when you were interpreting claim 1 and the remainder of the claims that your interpretation would be inconsistent with the prosecution history?
>
> A. No, I did not.

Wiskamp Tr. 428.

Mr. Wiskamp's failure to consider the prosecution history means that although he may be a technical expert who can provide factual and opinion testimony concerning the compressed air and pneumatics industry and FRL connections in general, his testimony concerning the meaning of the patent (not just the term "flange") is clouded by the fact that he surprisingly did not review all of the intrinsic patent evidence. One can never know whether his testimony would have changed if he had reviewed it.

At this post-hearing stage, Norgren has finally settled upon a definition that is, as correctly argued by the Staff, "amorphous and generic." Indeed, Norgren now argues in its brief that to one of ordinary skill in 1993, a "flange" was simply "any general connection feature used to join two faces together." Similarly, "a generally rectangular flange," according to Norgren's brief, is a "rectangular or close to rectangular attachment feature that allows the connector to engage and/or align two FRLs in parallel relationship with each other such that a fluid tight seal is maintained between the respective ports on the FRLs." When trying to locate a "flange," Norgren simply directs one to an "attachment feature." *See, e.g.*, Norgren Br. at 13-14 (claim construction), 37 (infringement).

Furthermore, Norgren argues that one must look at the "entire attachment feature." Norgren Br. at 13, 15 ("The term 'flange' in the '392 patent claims can only refer to the entire attachment feature on the FRL."). However, it is difficult, if not impossible, to determine exactly what Norgren would delineate as an "attachment feature" or more precisely, an "entire attachment feature."

Still, there are some illustrations of such features provided by Norgren in connection with the infringement issue, and also specifically with regard to claim construction, which shed some light on how Norgren's position could be applied. For example, above in this section in which Norgren's argument was first summarized, see p. 17, there is a figure from the Ribble prior art patent that was highlighted by Norgren to show a "flange" such as that mentioned in

the claim preamble. In that illustration, Norgren has highlighted, among other things, the projecting rims (or wedges), the structure that exists on a plane between the rims (which includes the hole or port through which fluid may flow), and the top part of the structure that stands between the main body of the FRL and the aforementioned surface with rims and a port. However, there is no support in the specification for designating any structure not received into the clamp as a "flange" or a part thereof.

The language of claim 1 provides in part: "one of said sides of the clamp being pivotally mounted so that said one side can be pivoted out of said operative clamping position *in order to permit reception of said flanges* into the clamp and then pivoted back into said operative clamping position...." JX-1, col. 4, ll 53-55 (emphasis added). Thus, the "flanges" according to the plain language of claim 1 are the portions each FRL that are received "into the clamp." This is consistent with the definition of a flange proposed by SMC (and as to which the Staff is amenable). However, this portion of the claim language is contrary to the arguments set forth by Norgren that would encompass the so-called "entire attachment feature," which (although vague) is shown by Norgren to include portions of the structure behind the flange, which are not received into the clamp.[16]

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[16] As discussed, *supra*, the value, if any, of Wiskamp's statements concerning patent terms is called into question by the fact that he had not read the prosecution history at the time of the hearing. Nevertheless, it should be noted that at one point during the hearing, Norgren, though its expert, admitted

The specification of the '392 patent provides written and pictorial descriptions of flanges that are consistent with the understanding provided by the claim language. These portions of the specification pertain to a preferred embodiment of the claimed invention, and no need has been shown to restrict the

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that the flange is the structure received into the clamp, as follows:

> Q. You testified, I believe yesterday, that a flange means a connecting device. Is that true?
>
> A. It goes into a connecting device, that's what I meant to say, the flange -- are we talking about the flange on the compressor units?
>
> Q. The flange that's discussed in claim 1?
>
> A. Yes. It's part of that connection, it's the connection method it receives -- it's used to make the connection.
>
> Q. What's your understanding of the term flange as it's used in claim 1 of the `392 patent?
>
> A. It's easier for me to show, but essentially if I were to take a Norgren product or an SMC product, and note the entire structure that is received by the clamping system, *that which would be inside of the clamp would be what I would consider the flange structure of the compressed air components.*
>
> Q. So the flange would be inside the clamp –
>
> A. What goes into the clamp, what would be -- what would fit into the corresponding surfaces in the clamp. It might be easier to show.

Wiskamp Tr. 441-442 (emphasis added).

claims to the preferred embodiment. Thus, for example, the claimed connecting structure need not necessarily be adapted to engage flanges that are exactly like those depicted in the specification. Nevertheless, it is to be assumed that the embodiments of the specification are consistent with the claim language. In this instance, the flanges described in the specification are consistent with the understanding of the term provided by the claim language. For example, in Figure 3 (reproduced above in section III B) item **30** is labeled as "a rectangular connecting flange," and item **26** also depicts a flange and the edges of the flanges. They are shown (to use the precise claim language) following their "reception into the clamp." JX-1, col. 3, ll. 29-38, col. 4, l. 28. See Trumper Tr. 601-602 (discussing the flanges described in the specification).

Consequently, the flange referred to in the preamble of claim 1 is the structure with projecting rims that is received into the clamp. A question remains, however, as to whether there must be four projecting rims, or whether it may have only two.

In view of the fact that the clamp must be four-sided, and the clamp is specially adapted to engage the generally rectangular ported flanges of the FRLs, it is reasonable to conclude that the each rectangular flange is engaged on all four of its sides by the four-sided clamp. Thus, the clamp is adapted to engage flanges with four projecting rims. The nature of the clamp is further detailed immediately below.

2. **"a four-sided generally rectangular clamp adapted, in its operative clamping position, to engage, in parallel relationship with one another, the pair of ported flanges"**

This portion of the language of claim 1 could be addressed in unison, or broken into two parts, *i.e.*, "a four-sided generally rectangular clamp," and the remaining portion focused on the term "adapted" ("adapted, in its operative clamping position, to engage, in parallel relationship with one another, the pair of ported flanges"). However, all of this claim language occurs in series, and is punctuated after the word "adapted" so as to group together the terms "clamp" and its modifier "adapted." Thus, it is useful to discuss this text together, rather than treating it as two separate claim limitations. In any event, as seen throughout this claim construction analysis and in many of the briefs filed by the parties, "flange," "clamp" and "adapted" are claim terms that undisputedly have a close relationship in the '392 patent claims that reflects the fact that the flange and adapted clamp structures work together in the claimed connecting device to join together two fluid flow elements (such as FRLs).[17]

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[17] Norgren and the Staff have tied the "adapted" portion of the claim language to other, specific portions of text that act as distinct claim limitations. For example, in its main post-hearing brief, Norgren groups under the same heading the term "adapted" with the previously discussed claim term (*i.e.*, a generally rectangular ported flange) because the adaptation at issue relates to ported flanges. However, the text of Norgren's

Norgren argues that the words in the phrase "a four-sided generally rectangular clamp" "need no special definition and none of the parties contend[s] that there are any terms of art in this phrase or that the specification limits the scope of the ordinary meaning of the words." Norgren, therefore, proposes that the term be construed to mean "a clamp that has four sides and is either rectangular or close to rectangular in shape." Norgren Br. at 15-16.

Further, as discussed above, while Norgren takes that position that the generally rectangular ported flanges are not a claim limitation, Norgren admits that the four-sided clamp must be, as per the claim language, "adapted in its operative clamping position, to engage, in parallel relationship with one another, the pair of ported flanges." *See Id.* at 9-10 (fn. omitted). Of course, Norgren argues that such an adaptation includes engagement with a flange having only two projecting rims (or apparently even no such rims), while SMC and the Staff argue that four rims must be provided.

SMC states that the term "'a four-sided, generally rectangular clamp' should be construed to

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discussion also closely ties the "clamp" element to the term "adapted." *See* Norgren Br. at 9.

The Staff discusses the phrase "adapted . . . to engage" in relation to the generally rectangular ported flanges, but treats it as a separate limitation. *See* Staff Br. at 7 (claim construction), 14-16 (claim construction), 29 (infringement), 31-32 (infringement).

SMC does not treat "adapted" and text that immediately follows it as a distinct claim limitation. *See* SMC Br. at 12-19.

mean a rectangular-shaped clamp having four sides." SMC Br. at 16. SMC states that this construction in consistent with the '392 patent specification and prosecution history, as well as the testimony of its expert concerning the understanding of one of ordinary skill in the art. *Id.* at 16-19. SMC observes in its reply brief that its proposed construction agrees with that of Norgren and the Staff. SMC Reply Br. at 6.

In its reply, SMC further notes Staff's concern that SMC may be attempting to read the term "generally" out of the claims by, among other things, leaving the word "generally" out of its proposed construction for this term as recited in its proposed construction. *See Id.* at 6 (citing Staff Br. at 16-18). However, SMC clarifies in its reply that "the pertinent feature being claimed by this limitation is that the clamp has four sides and is rectangular in shape (be it perfectly or imperfectly rectangular)." *Id.* In addition, SMC concurs with the view of the Staff (detailed below) that the four sides of the rectangular clamp must "engage" the generally rectangular ported flanges so as to fit over said flanges and not merely be in contact with them. *Id.*

Indeed, the Staff argues that "a four-sided generally rectangular clamp" is a "rectangular or close to rectangular shaped clamp having four sides." Staff Br. at 16. Further, the Staff does argue (as anticipated by SMC) that the clamp must be adapted so as to "fit over the 'generally rectangular ported flanges' not merely be in contact with them." Staff Br. at 14. Staff submits that such a construction is consistent with the specification, and also the

prosecution history in which Norgren, on behalf of the applicant, distinguished the claimed clamp from the prior art by arguing that its clamp can be pivoted out of its operative position in order "to fit the clamp over flanges of fluid flow element." *Id.* at 14-15 (quoting JX-2, May 29, 1994 Amendment, pages 4-5).

This Tribunal concurs that "a four-sided generally rectangular clamp" is rectangular or close to rectangular in its shape, and thus has four sides. It is further determined that the clamp must be adapted to engage the generally rectangular ported flanges of the "fluid flow elements" described in the claim preamble. Thus, the dimensions of the sides of the clamp must accommodate the sides of the flanges.

In addition, for the reasons stated by the Staff, which are grounded in the prosecution history of the asserted patent, the clamp must be adapted so that it fits over the flanges of the FRLs. *See Ekchian v. Home Depot, Inc.*, 104 F.3d 1299, 1304 (Fed. Cir. 1997)("[S]ince by distinguishing the claimed invention over the prior art, the applicant is indicating what the claims do not cover, he is by implication surrendering such protection."). Indeed, it is clear that when the applicants amended their claims to overcome a prior art rejection under 35 U.S.C. § 103 (obviousness), they differentiated their claimed invention by stating that the clamp fits over the flanges, as follows:

> Neither of the primary references, Edmaier and Abbes, discloses a clamp of rectangular shape wherein one of the sides is pivotally mounted so that it can be

> pivoted out of its operative position in order *to fit the clamp over flanges of fluid-flow elements.*

JX-2, May 29, 1994 Amendment, pages 4-5 (emphasis added). Norgren's application was subsequently allowed. *See* JX-002, June 8, 1994 Notice of Allowability.

The four-sided clamp must engage, or fit over, the flanges of the fluid flow elements, and in doing so it necessarily fits over all four edges of the generally rectangular flanges. The applicants did not tell the examiner that the clamp fits over only part of the flange. In fact, there is nothing in the claim language, the specification, or the prosecution history to suggest anything less.

Norgren offers no explanation as to why, if the clamp were adapted to engage a flange with only two projecting rims, the claim emphasizes the generally rectangular shape of the flange, and moreover, why the claim requires as a limitation that the clamp be four-sided. There is nothing in the claim language, the specification, or the prosecution history (quoted above) to indicate that somehow a four-sided clamp fitting over a generally rectangular (*i.e.*, four-sided) flange could fit over only two sides of the rectangle, or how a rectangle could have only two sides.

The mechanics of how the clamp in the claimed invention engages, or fits over, all four sides is clarified by understanding that one side of the clamp is "pivotally mounted," a claim limitation discussed immediately below.

3. "pivotally mounted"

With respect to the sides of the required four-sided, generally rectangular clamp, claim 1 provides: "one of said sides of the clamp being *pivotally mounted* so that said one side can be pivoted out of said operative clamping position in order to permit reception of said flanges into the clamp and then pivoted back into said operative clamping position ...." JX-1, col. 4, ll.53-57 (emphasis added).

The fact that the claimed clamp has a side that is "pivotally mounted" relates to the manner in which the clamp engages the flanges on the two fluid flow elements in order to join them. As discussed above, the connector's clamp structure must cover the flange on each fluid flow element, rather than merely coming into contact with the flanges. As described in the claim language, to allow the clamp to fit around a flange, one of its sides may be moved and then secured back in place. In the words of the claim, one side is "pivotally mounted" on the remaining portion of the clamp. That much is undisputed.

However, questions have been raised in this investigation regarding the mounting itself, and specifically whether the clamp is limited so that the side that can pivot must be mounted in a "hinge-like" manner so as to have "no loose parts."

SMC relies on the specification and expert testimony to argue that "the proper construction of the term 'pivotally mounted' is a hinge-like mount with no loose parts." *See* SMC Br. at 19-21. Norgren rejects any such additional limitations to the claim

structure, and proposes that "pivotally mounted" means "placed or fastened in a way that allows an object to move about a point." *See* Norgren Br. at 16-20. Similarly, the Staff rejects the additional limitations proposed by SMC, and argues that "pivotally mounted" should be construed as "placed or fastened in a way that allows an object to move about a point." *See* Staff Br. at 18-23.

SMC's proposed construction is rejected. The term at issue, *i.e.*, "pivotally mounted," tells the reader "how" the side of the clamp moves, *i.e.*, it "pivots;" it is "pivotally mounted." SMC seeks to convert the language at issue into the noun, or the thing itself, *i.e.*, SMC argues that "pivotally mounted" means "a hinge-like mount." Yet, the term "pivotally mounted" says nothing about the physical structure of the side of the claimed clamp that pivots, or the structure by which it is mounted on the rest of the clamp. It does not say whether the side is capable of pivoting because it is mounted on a hinge, hinge-like structure, or by some other means. Nor does the term "pivotally mounted" indicate whether or not there are loose parts.

SMC's claim construction would also impermissibly limit the claims of the '392 patent to a preferred embodiment. Although the '392 specification repeatedly emphasizes "a hinge-like mount" and "no loose parts," it does so exclusively in the context of preferred embodiments.[18]

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[18] *See* JX-1, col. 1, ll. 32-36 (a "preferably unitary connecting means"); col. 2, ll. 1-4 ("Preferably, the said one side of the clamp is pivotally mounted on the spacer or on an adjacent side of the clamp by means of a hinge-like mounting."); col. 2, ll. 5-9

Consequently, inasmuch as the inventors emphasized that a "hinge-like mount" and "no loose parts" are preferred embodiments, the claims should not be so limited. *See E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1370 (Fed. Cir. 2003)("An invention may possess a number of advantages or purposes, and there is no requirement that every claim directed to that invention be limited to encompass all of them.").

Moreover, as noted by the Staff, it appears that the '392 specification discloses an embodiment that does not require a "hinge-like mount" for purposes of "pivotally mounting" one side of the clamp.[19] In particular, the device depicted in Figure 1 (reproduced above in section III B, at page 10) utilizes "a generally U-shaped stirrup **17** pivotally hung on the L-shaped projection **14**," attached to a spacer (labeled as item **2**). JX-1, col. 2, l. 66 through col. 4, l. 1. The specification does not characterize this embodiment as having a "hinge-like mount." In contrast, the specification also discloses in Figure 5, an "alternative design" to that disclosed in Figure 1,

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("Accordingly, it will be appreciated that the connecting means of the invention *may be a unitary structure* in the sense that it has no loose parts that might otherwise get lost by the user.")(emphasis added); col. 3, ll. 57-61 ("[T]he *preferred connecting means* of the invention described above is, when its components are assembled together, unitary in nature, is relatively simple and inexpensive to manufacture and is simple to manipulate.")(emphasis added)); col. 3, ll. 62-66 (a "hingedly mounted" preferred embodiment).

[19] As a general rule, claim interpretations that operate to exclude the preferred embodiment, are "rarely, if ever, correct and require highly persuasive evidentiary support." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996).

in which the elements are "retained together in hinge-like fashion by means of a pin 37 that passes through the bore 35." JX-1, col. 2, ll. 24-27; col. 4, ll. 3-15. Thus, the specification supports a broader definition of the term "pivotally mounted," than one requiring a hinge-like mount.

Finally, although claim differentiation cannot be used unjustifiably to broaden the scope of the claims, it can be relied on as support for a claim construction that is entirely consistent with the intrinsic record. *See Phillips*, 415 F.3d at 1324-35 (relying on the doctrine of claim differentiation to support the conclusion that one skilled in the art reading the specification would not limit the claims to a preferred embodiment). Moreover, a claim construction that renders a dependent claim superfluous is presumptively unreasonable. *Beachcombers v. WildeWood Creative Prods., Inc.*, 31 F.3d 1154, 1162 (Fed. Cir. 1994). In this instance, dependent claims 5 and 7, add the limitation that "one side of the clamp is captively and pivotally mounted." The use of the term "captively" suggests that one side of the clamp is mounted in a secure or confined fashion such that there are no loose parts. The use of the word "captive" in claims 5 and 7 also shows that the patentee did not intend the "pivotally mounted" side of the clamp in claim 1 necessarily to be captive.

When questioned during the hearing about the difference between "pivotally mounted" and "captively," as used in the claims, SMC's expert testified that they meant the same thing. *See* Trumper Tr. 659. This trend continues in SMC's brief that downplays the dependent claims with

additional limitations based on the term "captively." However, if those words have the same meaning in the '392 patent, then the dependent claims have sought to add superfluous limitations. It is improper, however, to eliminate claim limitations as every word in a claim is material and must be considered. *Bincon, Inc. v. Strauman Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006)("[C]laims are interpreted with an eye toward giving effect to all terms in the claim.").

Accordingly, for the reason stated above, "pivotally mounted" is construed to mean "placed or fastened in way that allows an object to move about a point." A hinge-like mounting with no loose parts is not required.

IV. INFRINGEMENT DETERMINATION

As detailed above, Norgren accuses SMC products of infringing one or more claims of the asserted '392 patent. It is argued that although the products literally infringe the asserted claim, infringement could, in the alternative, be found under the doctrine of equivalents. *See* Norgren Br. at 23-38.

A. Applicable Law

In a section 337 investigation, the complainant bears the burden of proving infringement of the asserted patent claims by a preponderance of the evidence. *Certain Flooring Products*, Inv. No. 337-TA-443, Commission Notice of Final Determination of No Violation of Section 337, 2002 WL 448690 at 59, (March 22, 2002); *Enercon GmbH v. Int'l Trade Comm'n*, 151 F.3d 1376 (Fed. Cir. 1998).

Each patent claim element or limitation is considered material and essential. *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991). Literal infringement of a claim occurs when every limitation recited in the claim appears in the accused device, *i.e.*, when the properly construed claim reads on the accused device exactly. *Amhil Enters., Ltd v. Wawa, Inc.*, 81 F.3d 1554, 1562 (Fed. Cir. 1996); *Southwall Tech. v. Cardinal IG Co.*, 54 F.3d 1570, 1575 (Fed Cir. 1995).

If the accused product does not literally infringe the patent claim, infringement might be found under the doctrine of equivalents. The Supreme Court has described the essential inquiry of the doctrine of equivalents analysis in terms of whether the accused product or process contains elements identical or equivalent to each claimed element of the patented invention. *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 40 (1997).

Under the doctrine of equivalents, infringement may be found if the accused product or process performs substantially the same function in substantially the same way to obtain substantially the same result. *Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1043 (Fed. Cir. 1993). The doctrine of equivalents does not allow claim limitations to be ignored. Evidence must be presented on a limitation-by-limitation basis, and not for the invention as a whole. *Warner-Jenkinson*, 520 U.S. at 29; *Hughes Aircraft Co. v. U.S.*, 86 F.3d 1566 (Fed. Cir. 1996). Thus, if an element is missing or not satisfied, infringement cannot be found under the doctrine of equivalents as a matter of law. *See, e.g.*,

Wright Medical, 122 F.3d 1440, 1444 (Fed. Cir. 1997); *Dolly, Inc. v. Spalding & Evenflo Cos., Inc.*, 16 F.3d 394, 398 (Fed. Cir. 1994); *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538-39 (Fed. Cir. 1991); *Becton Dickinson and Co. v. C.R. Bard, Inc.*, 922 F.2d 792, 798 (Fed. Cir. 1990).

The concept of equivalency cannot embrace a structure that is specifically excluded from the scope of the claims. *Athletic Alternatives v. Prince Mfg., Inc.*, 73 F.3d 1573, 1581 (Fed. Cir. 1996). In applying the doctrine of equivalents, the Commission must be informed by the fundamental principle that a patent's claims define the limits of its protection. *See Charles Greiner & Co. v. Mari-Med. Mfg., Inc.*, 92 F.2d 1031, 1036 (Fed. Cir. 1992). As the Supreme Court has affirmed:

> Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole. It is important to ensure that the application of the doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety.

Warner-Jenkinson, 520 U.S. at 29.

Prosecution history estoppel may bar the patentee from asserting equivalents if the scope of the claims has been narrowed by amendment during prosecution. A narrowing amendment may occur

when either a preexisting claim limitation is narrowed by amendment, or a new claim limitation is added by amendment. These decisions make no distinction between the narrowing of a preexisting limitation and the addition of a new limitation. Either amendment will give rise to a presumptive estoppel if made for a reason related to patentability. *Honeywell Int'l inc. v. Hamilton Sundstrand Corp.*, 370 F.3d 1131, 1139-41 (Fed. Cir. 2004), *cert. denied*, 545 U.S. 1127 (2005)(citing *Warner-Jenkinson*, 520 U.S. at 22, 33-34; and *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 733-34, 741 (2002)). The presumption of estoppel may be rebutted if the patentee can demonstrate that: (1) the alleged equivalent would have been unforeseeable at the time the narrowing amendment was made; (2) the rationale underlying the narrowing amendment bore no more than a tangential relation to the equivalent at issue; or (3) there was some other reason suggesting that the patentee could not reasonably have been expected to have described the alleged equivalent. *Honeywell*, 370 F.3d at 1140 (citing, *inter alia*, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359 (Fed. Cir. 2003)(*en banc*)).

B. Analysis of the Accused Products

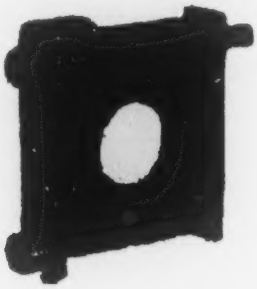
As discussed above in section I B (Products at Issue), Norgren alleges that some or all of the SMC products at issue infringe all claims of the '392 patent, except claims 6 and 8, as follows: claim 1 (all connectors), claim 2 (all connectors), claim 3 (all connectors), claim 4 (all connectors), claim 5 (all connectors), claim 7 (all connectors), and claim 9

(SMC's fluid flow elements when engaged with a connector). It is alleged that the infringement occurs literally, or in the alternative, under the doctrine of equivalents. *See* Norgren Brief at 21-38.

1. **Claim 1**

a. **No Literal Infringement**

As discussed above in section I B, SMC's Y400 is representative of the "new style" connectors accused of infringing independent claim 1, as well as several dependent claims of the '392 patent. A representative depiction of SMC's new style connector, similar to that found in Norgren's brief, the Staff's brief, and CX-82 (an SMC catalog) is reproduced below:



Y400

For the reasons stated below, it is found that the accused Norgren connectors do not literally infringe claim 1.

> i. **a four-sided generally rectangular clamp adapted, in its operative clamping position, to engage, in parallel relationship with one another, the pair of ported flanges**

As held in the section on claim construction, claim 1 requires a four-sided, generally rectangular clamp adapted to engage a pair of generally rectangular ported flanges located on two fluid flow elements. In particular, it was determined that the clamp must engage four projecting rims on each flange. As seen in a representative sample of an SMC FRL, marked as RPX-11, the SMC units to which the accused products connect have two, not four, ear-like projections on either side of the port. *See* RPX-11. This distinction is fatal to Norgren's infringement case.

Taku Tomita, the designer of the accused SMC products and FRL units, explained during the hearing that the accused products are all adapted to connect to these two ear-like projections rather than a generally rectangular ported flange. *See* Tomita Tr. 586-588. SMC's technical expert, Dr. Trumper, confirmed that SMC's FRL units have two ear-like projections and not a generally rectangular ported flange. In particular, Dr. Trumper explained that there are no projections on the top and bottom of SMC's modular FRL units. There are mounting ears only on the left and right sides of the unit. *See* Trumper Tr. 606. Dr. Trumper also confirmed that SMC's accused products are not adapted to connect to a "generally rectangular flange" with four projecting rims. *See* Trumper Tr. 601, 604-605, 607.

Norgren has argued, however, that SMC's accused products are adapted to engage flanges of various types, including a modified flange of a Norgren product that normally has four projecting rims, as represented by CPX-8. *See* Norgren Br. at

27-28. This exhibit and Norgren's related testimony have no probative value, and do not demonstrate that SMC's accused products meet the claim limitation for at least two reasons.

First, Norgren was unable at the hearing to explain how the Norgren FRL unit was modified, or who made the modifications. Nor was any explanation provided by complainant for the fact the modified FRL had been repainted in a manner such that the modifications were not readily apparent. *See* Wiskamp Tr. 433-436. Second, and perhaps most telling, is the fact that Norgren had to modify the Norgren FRL unit in order to attach it to SMC's accused connector. This modification demonstrates that the connector is not in fact adapted to engage a generally rectangular ported flange.

Further, as explained above in the section on claim construction, in the context of the asserted claims, "engage" means "fits over." Thus, claim 1 requires that each side of the four-sided, generally rectangular clamp must fit over a corresponding side of the "generally rectangular ported flange." SMC's accused connector, however, does not fit over a generally rectangular ported flange, *i.e.*, a flange having projections on all four sides, as claimed by the '392 patent. The evidence presented at the hearing confirms that only the two wing-like parts on the retainer located on SMC's accused connectors fit over the two ear-like projections on the SMC FRL unit. *See* Tomita Tr. 586-587.[20] Thus, the fact that SMC's

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[20] A visual inspection of RX-6 (an SMC connector) and RX-10 (an SMC FRL) shows that when they are connected, the wings on

accused devices only fit over two "projecting ears," rather than a flange having projecting rims on all four sides, is yet another reason why the SMC accused devices do not literally infringe claim 1 of the '392 patent.

In sum, based on the above, the evidence shows that the accused products do not provide a four-sided, generally rectangular clamp that is adapted to engage a pair of generally rectangular ported flanges, as required by claim 1. Thus, SMC's infringement claim must fail.

Nevertheless, it is found that the accused SMC connectors do provide a "four-sided generally rectangular clamp," even though that clamp is not adapted in such as way as to infringe. SMC and its expert contends that the accused connectors are two-sided, not four-sided. *See, e.g.*, Trumper Tr. 609. The record evidence shows otherwise.

At the hearing, SMC contended that the two sides of its accused connectors consist of a front

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the sides of the clamp fit over the projecting rims on the sides of an FRL flange, while the top of the flange rests against two small, block-like features that Dr. Trumper calls "alignment details" located at the top of the clamp. The flange is not received into that portion of the clamp. In fact, Dr. Trumper testified that the top of the "FRL," rather than the top of the "flange" rests against the so-called alignment details, presumably because there is no projecting rim on that edge of the FRL. Meanwhile, the bottom of the flange stops at the point of a long horizontal indentation or "groove" into which a bar or "spacer" of the clamp fits. The spacer does not, however, fit over the bottom of the flange. It is simply tightened into the groove. *See* Trumper Tr. 640-642 (cross-examination concerning the connection between RPX-6 and RPX-10).

retaining clip and a back retaining clip. *See* Trumper Tr. 609 ("Yes, this is a two-sided clamp, the clamping is effected with these retaining clippings, as we've called them, or retainers, there's an outer retainer, and then there's an inner retainer . . . ."). However, as observed at the hearing, in order for SMC's connector to function properly all four sides of the connecter were needed, which include the bolt, the pin, and the spacer. *See* Trumper Tr. 684-685. Thus, as assembled in the accused devices, the clamps do have four sides as required by claim 1. There is no dispute that its shape is generally rectangular. Nonetheless, as noted above, because the accused connectors do not accept generally rectangular ported flanges, Norgren's infringement assertion as to claim 1 must still fail.

ii. SMC's Accused Connectors Include a Pivotally Mounted Side

As detailed above in the section on claim construction, claim 1 does not require that one side of the clamp be hingedly-mounted so as to have no loose parts, as argued by SMC. Rather, in order to meet the "pivotally mounted" limitation, the side need only be "placed or fastened in way that allows an object to move about a point."

SMC's accused connectors contain at least one side that is placed or fastened in such a way that it can move about a point. While it is not hingedly-mounted, which SMC would require, there is no genuine dispute that the accused connectors contain such a feature. *See* SMC Br. at 28-30; Wiskamp Tr. 275. However, for the reasons mentioned above, the

finding that the accused devices do not infringe claim 1 remains unchanged.

b. The Doctrine of Equivalents

Norgren devotes approximately three pages of its post-hearing brief to its argument that to the extent the elements of the '392 patent are not literally present in the SMC devices, SMC infringes under the doctrine of equivalents. *See* Norgren Br. at 36-38. SMC and the Staff argue that Norgren is estopped from arguing the doctrine of equivalents, at least with respect to claim 1, the only independent claim asserted, and further that the record lacks of any pertinent evidence. *See* SMC Br. at 31-34; Staff Br. at 31-32.

It is found that Norgren is barred from asserting the doctrine of equivalents as to key claim limitations that are relevant to the infringement issues in this investigation. As discussed above in section IV A, under the Supreme Court's *Festo* opinion and similar case law, prosecution history estoppel may bar the patentee from asserting equivalents if the scope of the claims has been narrowed by amendment during prosecution. In this case, claim 1 was initially rejected by the PTO examiner under 35 U.S.C. § 112 because it was unclear as to whether the FRLs with their flanges were part of the claimed combination. *See* JX-2, February 25, 1994 Office Action, page 2. In response, Norgren amended claim 1, as follows:

> Connecting [means] <u>structure</u> for contiguously connecting together a pair of fluid-flow elements, <u>each fluid flow element</u>

> including a generally rectangular ported flange so as to define a pair of ported flanges associated with the fluid-flow elements . . . .

JX-2, May 29, 1994 Amendment, page 1.[21]

Thus, when Norgren amended claim 1, it relinquished coverage of a clamp designed to engage fluid-flow elements with flanges of any configuration. Instead, Norgren limited the scope of claim 1 to a clamp designed to operate with elements that have generally rectangular ported flanges, *i.e.*, flanges having four sides. Moreover, as discussed in connection with the claim construction issues, Norgren distinguished its claimed invention, and traversed the examiner's rejection, by arguing that its connector is designed "to fit the clamp over flanges of fluid flow elements." JX-2, May 29, 1994 Amendment, pages 4-5. Thus, Norgren argued that the clamp fits over generally rectangular flanges, not parts of flanges (*e.g.*, only two sides) or not at all (*e.g.*, a flange with no rims over which a clamp could fit).

Norgren cannot now seek to regain, through the doctrine of equivalents, that which it surrendered to obtain issuance of the patent. Thus, it could not be found that claim 1 is infringed, even under the doctrine of equivalents, by a clamp that fits around only two sides of a generally rectangular flange, effectively rendering the rectangular shape of the flanges and the clamp meaningless. Nor could

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[21] Pursuant to PTO practice, underlining indicates language added to the claim and brackets indicate language deleted from the claim. *See* Grauer Tr. 728.

Norgren argue that the clamp engages the flanges in any manner other than by fitting around them. For at least those reasons, the SMC connector, which does not fit around four sides of a flange (but rather fits over only a portion of two projecting rims), could not be found under the doctrine of equivalents to satisfy the limitations of independent claim 1.

In addition, SMC and the Staff are correct in their arguments that the record contains little, if any, evidence to support a finding of infringement under the doctrine of equivalents. Norgren's scant citations to the record (which largely depend upon the testimony of SMC's Dr. Trumper and Taku Tomita) do not present a case of infringement under the doctrine of equivalents. *See* Norgren Br. at 37. In fact, SMC's witnesses aside, Norgren would have been hampered in any attempt to put on a case of its own concerning the doctrine of equivalents given the damaging testimony of its own expert. In that regard, during cross-examination at the hearing in this investigation, SMC adduced the following testimony from Norgren's expert:

> Q. And I guess the correct lines would be 4 through 15. And the question was, "do you understand what type of infringement you're arguing there?
>
> "Answer: No.["]
>
> "Question: Do you understand the difference between literal infringement and infringement under the doctrine of equivalents?"

And then the answer is "no."

And this was your testimony on, as I say, October 12 of '07. So would it be fair to say at that time, you did not understand the difference between literal infringement and infringement under the doctrine of equivalents?

A. I stand by what I said.

Q. And do you recall that you had already submitted an expert report at that time?

A. Yes.

Q. And the testimony you gave on direct, do you think any of that testimony was directed to doctrine of equivalents infringement?

A. I don't know.

Q. *Would it be fair to say that even today you do not understand the difference between literal infringement and doctrine of equivalents infringement?*

A. *Correct.*

Wiskamp Tr. 432-433 (emphasis added).[22]

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[22] Despite this admission, Wiskamp's expert reports nonetheless contain statements that were written in view of the doctrine of equivalents. Most notable is the following:

Due to the fact that Norgren is estopped from arguing the doctrine of equivalents with respect to certain aspects of claim 1, and in view of the lack of record evidence concerning the doctrine of equivalents, it is not found that the accused SMC products infringe claim 1 under the doctrine of equivalents.

2. Claims 2-5, 7 and 9

Inasmuch as each claim limitation must be present in an accused device in order for infringement to be found (either literally or under the doctrine of equivalents), a device cannot infringe a dependent claim if it does not practice every limitation of the independent claim from which it depends. *See Warner-Jenkinson Co.*, 520 U.S. at 40; *Monsanto Co. v. Syngenta Seeds, Inc.*, 503 F.3d 1352, 1359 (Fed. Cir. 2007). Therefore, in this instance,

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> 83. If the court determines that the flange must have rims on each of the four sides, *then the SMC attachment feature performs the same function described in the '392 patent specification in the same way and with the same result.* The SMC attachment feature has flanges with two edges that urge the two air conditioning units together when the connector's locking means is tightened.

Rebuttal Expert Report of John C. Wiskamp, ¶ 83, page 17 (filed Sept. 19, 2007)(emphasis added).

Yet, as seen in the transcript portion, quoted *supra*, Mr. Wiskamp testified that he was ignorant of the doctrine of equivalents. In any event, during the hearing he did not analyze SMC's devices in terms of the function-way-result test recited in the rebuttal report, nor did he in any other manner provide testimony to support the statements that are contained in his expert reports which relate to the doctrine of equivalents.

inasmuch as no accused product contains each limitation of the only independent claim, which is claim 1, none of the other asserted, dependent claims can be found to infringe.

However, it noted that with respect to the infringement issue (as opposed to the claim construction issue), SMC did not brief the particular limitations added by the asserted dependent claims. Rather, SMC relied on its non-infringement of independent claim 1 to argue that the dependent claims are not infringed. *See* SMC Br. at 31; SMC Reply Br. at 10-14. In contrast, Norgren provided at least a cursory briefing for all of the dependent claims, with citations to record evidence. *See* Norgren Br. at 32-36. Consequently, if it were found that SMC infringed claim 1, SMC might also be exposed to liability for infringement of the other asserted claims.

In addition, claim 9 deserves special attention because it contains a substantially more detailed definition of a fluid flow element, and Norgren sets forth broader infringement allegations with respect to claim 9. Claim 9 provides, as follows:

> 9. Connecting structure according to claim 1, wherein said fluid flow elements include a first compressed air-conditioning unit and a second air-conditioning unit, said clamp being constructed and arranged to connect said first compressed air-conditioning unit to said second air-conditioning unit.

JX-1, col. 6, ll. 16-21.

Norgren argues that "[c]laim 9 includes within its scope the FRLs that are adapted to engage with the SMC connector." Norgren Br. at 34. It submits that contrary to some of the arguments raised during the pre-hearing phase of this investigation, nothing in the prosecution history prevents FRLs from being added as an additional limitation on the invention by claim 9. However, Norgren offers little to demonstrate that FRLs are actually added as a limitation. *See Id.* at 34-36.

Rather, claim 9 by its plain language defines the fluid flow elements referred to in claim 1 (beginning in the preamble) such that according to claim 9 they must include first and second air-conditioning units. However, as discussed at length above, this Tribunal agrees with Norgren that the fluid flow units are not in and of themselves limitations on the invention claimed in claim 1; and nor are they limitations with respect to claim 9. Claim 9 merely further defines the fluid flow elements to be joined by the claimed connector. As in the case of claim 1, the clamp of claim 9 is a limitation on the invention. The claimed clamp must not only be adapted to engage generally rectangular ported flanges, as in claim 1, but in accordance with claim 9 the clamp must be "constructed and arranged to connect said first compressed air-conditioning unit to said second air-conditioning unit."

Granted, there is a symmetry between claim 1 and claim 9 in the way that the fluid flow elements are further defined in claim 9, and in the way that

the plain language of claim 9 further limits the clamp to be used with such air-conditioning units. There is, however, no indication in the language of claim 9 that the air-conditioning units are limitations on the claimed invention. Indeed, as in the case of claim 1, the plain language of claim 9 states that a "[c]onnecting structure" is claimed, not a fluid flow element such as an FRL, or any type of air-conditioning unit.

In addition, Norgren cites to no support for this broader infringement argument in the specification, and indeed none is there. This fact further supports a finding that Norgren's infringement argument with respect to claim 9 is in error. If claim 9 were construed to cover FRLs or an "air conditioning unit," a substantial question would be raised as to whether or not the specification adequately supports claim 9.

Consequently, claim 9 is not infringed because independent claim 1 is not infringed. Further, even if claim 9 were infringed, a finding of infringement could not extend to SMC's FRLs, but would cover only the accused connectors.

As stated above in section I B, Norgren accuses of infringement SMC's FRLs and "[e]very larger pneumatic system that incorporates the SMC connector and FRLs." *See* Norgren Br. at 21-23. Yet, the only infringement argument made by Norgren that could possibly be understood to address products other than SMC's connectors is the above argument concerning claim 9. Even if Norgren had intended to set forth other legal or factual arguments are to why devices other than connectors should be found to

infringe, it did not do so. Nevertheless, as stated above, the question of whether SMC FRLs and pneumatic systems should be excluded as downstream products, not necessarily as infringing products, will be discussed in the Recommended Determination on the question of remedy.

V. VALIDITY

A. Background

One cannot be held liable for practicing an invalid patent claim. *See Pandrol USA, LP v. AirBoss Railway Prods., Inc.*, 320 F.3d 1354, 1365 (Fed. Cir. 2003). However, the claims of a patent are presumed to be valid. 35 U.S.C. § 282; *DMI Inc. v. Deere & Co.*, 802 F.2d 421 (Fed. Cir. 1986). Although a complainant has the burden of proving a violation of section 337, it can rely on this presumption of validity. A respondent that has raised patent invalidity as an affirmative defense must overcome the presumption by "clear and convincing" evidence of invalidity. *Checkpoint Systems, Inc. v. United States Int'l Trade Comm'n*, 54 F.3d 756, 761 (Fed. Cir. 1995).

SMC argues as an affirmative defense in this investigation that the asserted claims of the '392 patent are invalid. In particular, SMC argues that the claims are invalid as obvious under 35 U.S.C. § 103. SMC asserts that its allegations are not dependent on the application of Norgren's proposed claim construction, but that the claims are obvious even under SMC's narrower proposed construction. Numerous grounds of potential obviousness were

raised during this investigation. However, in its post-hearing brief, SMC argues that the claims are invalid in view of (1) SMC's older style connector from 1984, with U.S. Patent No. 4,533,020 to Yamazaki (RX-22) as a description of SMC's older style connector, and (2) a combination of U.S. Patent No. 4,400,018 to Abbes et al. (RX-21) and U.S. Patent No. 4,915,418 to Palatchy (RX-27).[23] *See* SMC Br. at 34-43; RPFF 93-94 (concerning the Yamazaki patent, which is not raised directly in SMC's brief); RPCL 4-6.

Norgren denies that its asserted claims are invalid. *See* Norgren Br. at 38-44. The Staff argues that the asserted claims are not invalid when properly construed. The Staff does, however, argue that under Norgren's overly broad construction of the claims, they would be invalid. *See* Staff Br. 33-43.

B. Applicable Law of Obviousness

Obviousness is grounded in 35 U.S.C. § 103, which provides, *inter alia*, that:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said

[23] SMC made only passing reference to other prior art to reinforce its main arguments. *See* SMC Br. at 39 n.7.

> subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

35 U.S.C. § 103(a).

An allegation of obviousness is evaluated under the so-called *Graham* factors: (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 13-17 (1966).

"One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent's claims." *KSR Int'l Co. v. Teleflex Inc.*, No. 04-1350, ___ U.S. ___, 127, S.Ct. 1727, 1742 (2007). "[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combing the elements in the manner claimed." *Id.*

Specific teachings, suggestions or motivations to combine prior art may provide helpful insights into the state of the art at the time of alleged invention. *Id.* at 1741. Nevertheless, "an obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. The diversity of inventive pursuits and of modern technology counsels against limiting the analysis in

this way." *Id.* "Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *Id.* at 1742. A "person of ordinary skill is also a person of ordinary creativity . . ." *Id.*

The Federal Circuit has harmonized the *KSR* opinion with many prior circuit court opinions by holding that when a patent challenger contends that a patent is invalid for obviousness based on a combination of prior art references, "the burden falls on the patent challenger to show by clear and convincing evidence that a person of ordinary skill in the art would have had reason to attempt to make the composition or device, or carry out the claimed process, and would have had a reasonable expectation of success in doing so. *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1360 (Fed. Cir. 2007)(citing *Medichem S.A. v. Rolabo S.L.*, 437 F.3d 1175, 1164 (Fed. Cir. 2006)); *Noelle v. Lederman*, 355 F.3d 1343, 1351-52 (Fed. Cir. 2004); *Brown & Williamson Tobacco Corp. v. Philip Morris, Inc.*, 229 F.3d 1120, 1121 (Fed .Cir. 2000) and *KSR*, 127 S.Ct. at 1740 ("a combination of elements 'must do more than yield a predictable result'; combining elements that work together 'in an unexpected and fruitful manner' would not have been obvious").

The ultimate determination of whether an invention would have been obvious is a legal conclusion based on underlying findings of fact. *In re Dembiczak*, 175 F.3d 994, 998 (Fed. Cir. 1999).

C. Analysis of the Asserted Claims

1. Claim 1

SMC argues that Norgren's expert admitted that the only difference between SMC's 1984 connector and claim 1 of the '392 patent is that Norgren's claimed connector includes a pivotally mounted side or hinge so that there are no loose parts. SMC argues that it would have been obvious to use a hinge if one were concerned about having loose parts, and in fact the prior art Palatchy patent specifically disclosed a circular flange connector in which one of the halves was connected to the other half with a hinge for ease of closing and thus had no loose parts. Further, SMC argues, there was nothing new about Norgren's connector adapted to receive a ported rectangular flange because prior art such as the Abbes patent was adapted to receive a circular flange with a clamp, and the use of a rectangular shape would have simply been a design choice to one of ordinary skill.[24] It is argued that even the use of a hinge such as that disclosed in Palatchy would have been merely a design choice. *See* SMC Br. at 38-42. As stated above, these arguments are rejected by Norgren and the Staff.

It must observed that Norgren's expert did, in fact, admit during his deposition that the only

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[24] SMC argues that inasmuch as Norgren has argued that the definition of a rectangular ported flange and a rectangular clamp are so broad that SMC connector infringes, only the use of a hinged mount with no loose parts is genuinely at issue. *See* SMC Br. at 40 (citing *Evans Cooling Sys., Inc. v. General Motors Corp.*, 125 F.3d 1448 (Fed. Cir. 1997)).

difference between prior art such as the old SMC connector and the claimed invention of the '392 patent is the fact that one side of the clamp pivots. At the hearing, it was impossible for him to distance himself from that prior testimony. *See* Wiskamp Tr. 331-343. Indeed, he had little choice but to make this admission in view of the fact that by the time of the hearing Norgren's proposed construction of the term "generally rectangular ported flange," and the four-side clamp limitation (including the "adapted" nature of the clamp) had become extremely broad so as to capture the accused SMC devices. As argued by SMC, it would, therefore, be permissible to look only to the "pivotally mounted" limitation of claim 1 to determine whether or not the claim is valid. Indeed, if Norgren's broad interpretation of claim 1 were adopted as the proper construction of the claim there would be no choice but to do so. However, when the claim is properly construed to be more limited, as detailed above in the section on claim construction, the record does not contain clear and convincing evidence of obviousness.

The Palatchy patent discloses circular pipe couplings formed from segments that provide a circular housing which encircle and connect pipes together. RX-27, col. 1, ll. 5-7. In particular, the Palatchy inventors provide that the segments that form the pipe couplings are "hingedly interconnected together so that the plumber may position and hold one segment upon the pipes to be coupled and the remaining segments may simply be hung beneath that one segment in position and ready to be pivoted into coupling position when the plumber is ready." RX-27, col. 2, ll. 18-24. SMC's expert also confirmed

that Palatchy discloses a clamp with a hinge-like connection capable of pivoting. *See* Trumper Tr. 617-618.

The Abbes and Yamazaki patents (and the old SMC connector) disclose different shaped clamps. Specifically, Abbes discloses a circular-shaped clamp consisting of semi-circular halves that are connected together by two bolts. The Abbes clamp connects to a circular shaped flange. Tramper Tr. 616-617. Yamazaki, or the SMC old-style connector, is a generally rectangular-shaped clamp that connects to mounting ears. *See* Wiskamp Tr. 338-339; RPX-1.

It might be tempting to suggest that one skilled in the art would have modified Abbes in view of Palatchy to arrive at the connecting structure of claim 1. Yet, both of those references were before the examiner during prosecution, and claim 1 was amended specifically to avoid the prior art. Further, none of the prior art that SMC has identified discloses a four-sided generally rectangular clamp that is adapted to engage a generally rectangular ported flange. Abbes, Yamazaki and the old SMC relate to clamps adapted to engage mounting ears or a circular flange. The claimed invention of the '392 patent is not merely a combination of old elements.

Nor is there evidence as to why one skilled in the art would have made modifications in view of the prior art to arrive at the claimed invention. Yet, under *KSR*, a party claiming obviousness must still "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in a way the claimed new invention does."

See KSR, 127 S.Ct. at 1741; *PharmaStem*, 491 F.3d at 1360. In particular, SMC's expert testimony failed to establish that generally rectangular ported flanges were known in the art at the time of the invention, or that one skilled in the art would have had a reason to modify the prior art connectors so that they were adapted to fit such flanges. Nor does the record explain how one of ordinary skill would have integrated a pivoting side into the clamp design. *See, e.g.*, Trumper Tr. 618-619. Asserting that such structures would have been design choices fails to explain how such choices would have been made, the ease with which they would have been executed, and the expectations that one might have had in implementing such designs. Perhaps more importantly, the record evidence does not explain why one would have chosen to combine the elements at issue from all of the other design choices that were available in 1993.

Accordingly, it has not been shown by clear and convincing evidence that claim 1 would have been obvious.

2. The Dependent Asserted Claims 2-5, 7 and 9

SMC argues that during the hearing Norgren "did not assert that there was anything unique or unobvious with respect to the subject matter of the asserted dependent claims." For each asserted dependent claim, SMC provides a brief citation to the testimony of its expert that the dependent claims would in fact have been obvious to one of ordinary skill in 1993. *See* SMC Br. at 41-42.

The Staff argues that the dependent asserted claims, when correctly construed, are not invalid due to obviousness for the same reasons that claim 1 has not been shown to be invalid. *See* Staff Br. at 38-39.

Norgren denies that under any party's proposed construction, the asserted claims are not invalid due to obviousness. Norgren's briefs do not, however, point to any reason why the added limitations of the dependent claims would preserve their validity even if claim 1 were found to have been obvious. *See* Norgren Br. at 38-44; Norgren Reply Br. at 16-27.

Indeed, this Tribunal is aware of no reason why the added limitations of claims 2-5, 7 and 9 would prevent them from being found to be invalid if claim 1 were found to be have been obvious (obviousness being the only basis for invalidity argued by any party). Thus, if claim 1 were found to be obvious, all of the asserted dependent claims should similarly be found invalid. That is not, however, the case. Inasmuch as claim 1 has not been found to be obvious, there is no basis for finding any of the asserted dependent claims to be invalid.

3. Secondary Considerations

As indicated above, one of the *Graham* factors which must be considered in an obviousness analysis, is "objective evidence of nonobviousness," also called "secondary considerations. *See Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1536 (Fed. Cir. 1983) ("Thus evidence arising out of the so-called 'secondary considerations' must always when present be considered en route to a determination of

obviousness."). However, secondary considerations, such as commercial success, will not always dislodge a determination of obviousness based on analysis of the prior art. *See KSR Int'l*, 127 S.Ct. at 1745 (commercial success did not alter conclusion of obviousness).

Secondary considerations did not constitute a major portion of Norgren's case, and indeed Norgren devotes approximately one page of its post-hearing brief to the topic. Nevertheless, Norgren argues that secondary considerations support a finding that the claims are valid. Norgren argues that its technical expert, Wiskamp knew people who worked with FRLs and were "amazed that a clamp with a pivoting side actually worked under the pressure" that exists in a typical compressed air system. Further, Norgren argues that the market had long expressed a need to have an FRL connector that allowed for ready installation or removal of an air-compressed unit hooked up to an assembly line in a busy factory and in a place that was difficult to access. It is argued that the prior art cited by SMC from the 1980s shows that others had failed for a decade before the '392 patent issued to solve the problem. Finally, Norgren argues that the claimed invention has been copied by SMC and another company in China. *See* Norgren Br. at 42-43 (citing Wiskamp Tr. 244-249, 253-254 and CPFF 9.18 - 9.20, 9.24).[25]

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[25] Norgren's reply brief also addresses secondary considerations, and relies in part of settlements reached with other manufacturers of connectors accused of infringement. That portion of the Norgren's reply was the subject of a joint motion

There is no reason to doubt the veracity of Mr. Wiskamp's recollection concerning the reception that Norgren's quick clamp received when it came on the market. The products appear at least in his experience to have been generally well-received. His testimony is, however, exceptionally brief, lacking in detail, and without substantial support elsewhere in record evidence. Thus, it is entitled to little weight.

The evidence concerning copying is even more scant, and it is questionable from both legal and factual perspectives. There is virtually no evidence of copying by one or more Chinese companies. Furthermore, as detailed in this decision, the SMC connector does not infringe any asserted claim of the '392 patent, and even if it did, that would not automatically prove that SMC copied Norgren's

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to strike (Motion No. 587-21) filed by SMC and the Staff. That motion was denied. *See* Order No. 14.

A settlement is often the product of many factors. Thus, settlements are generally of little probative value when assessing the strength of a secondary consideration. *See Certain Plastic Molding Machines*, Inv. No. 337-TA-462, Comm'n Op. at 20-21 (Apr. 2, 2003); Fed.R.Evid. 408 (1972 Advisory Committee Notes). Furthermore, Norgren chose not to offer the settlement papers as exhibits in the evidentiary record. The settlements at issue (which were based on consent order stipulations filed before the Commission) are in the overall record of this investigation because they were filed in connection with a motion to terminate. However, the specific royalty information referred to in Norgren's reply brief does not appear to be contained in any settlement document filed with the Commission Secretary. *See* Order No. 7 (Initial Determination), Motion No. 587-8 (Attachments). Nor has Norgren pointed out where such information is to be found. Consequently, the royalty argument set forth by Norgren is accorded no weight.

patent. *See Iron Grip Barbell Co., Inc. v. York Barbell Co., Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2005)("Not every competing product that arguably falls within the scope of the patent is evidence of copying. Otherwise every infringement suit would automatically confirm the nonobviousness of the patent. Rather, copying requires the replication of a specific product.").

The asserted claims of the '392 patent, when properly construed, have not been found invalid due to obviousness. In the event that the prior art would have otherwise rendered the claims obvious, secondary considerations, or objective indicia of nonobviousness, would have provided little support for the validity of the claims.

VI. DOMESTIC INDUSTRY

As stated in the notice of investigation, a determination must be made as to whether an industry in the United States exists as required by subsection (a)(2) of section 337. Section 337 declares unlawful the importation, the sale for importation or the sale in the United States after importation of articles that infringe a valid and enforceable U.S. patent only if an industry in the United States, relating to articles protected by the patent . . . concerned, exists or is in the process of being established. There is no requirement that the domestic industry be based on the same claim or claims alleged to be infringed. 19 U.S.C. § 1337(a)(2).

The domestic industry requirement consists of both an economic prong (*i.e.*, there must be an

industry in the United States) and a technical prong (i.e., that industry must relate to articles protected by the patent at issue). *See Certain Ammonium Octamolybdate Isomers,* Inv. No. 337-TA-477, Comm'n Op. at 55, USITC Pub. 3668 (Jan. 2004). The complainant bears the burden of proving the existence of a domestic industry. *Certain Methods of Making Carbonated Candy Products*, Inv. No. 337-TA-292, Comm'n Op. at 34-35, USITC Pub. 2390 (June 1991).

Thus, in this investigation it must be shown by Norgren that it satisfies both the technical and economic prongs of the domestic industry requirement with respect to the '112 patent. As noted, and as explained below, it is found that these domestic industry requirements have been satisfied.[26]

A. Technical Analysis

During the hearing, Norgren presented illustrations depicting its Quik Clamp products, upon which it relies for its domestic industry argument. In one of the illustrations, most of the Norgren product is highlighted to contrast it with a wall mount bracket that is not alleged to be covered by the '392 patent. *See* Wiskamp Tr. 292-295. In another illustration, Norgren highlighted a portion of its

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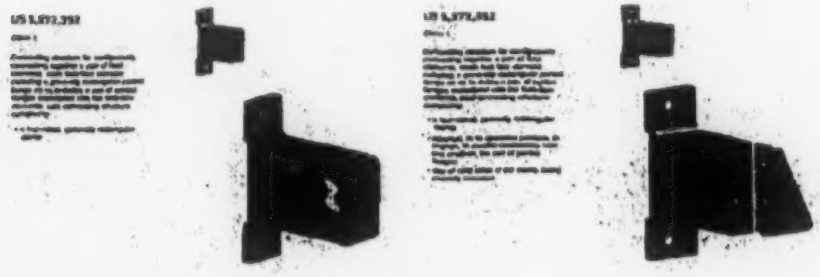
[26] SMC additionally argues that an owner of a U.S. patent "can bring a complaint" only if the domestic industry requirement is satisfied. See SMC Br. at 43. Further, SMC argues that "Norgren lacks standing in the Investigation because a domestic industry does not exist for the asserted '392 patent." See Id. at 59. Given the finding of this Tribunal that a domestic industry does in fact exist, there arguments need not be addressed here.

product to show that it has a pivotally mounted side. SMC reproduced these illustrations in its brief, and they are copied below.



CDX-7 (highlights in original).

Norgren has adduced uncontested evidence that its currently manufactured quick clamps practice at least claim 1 of the '392 patent. *See* Staff Br. at 43; Norgren Br. at 44; SMC Br. at 43-44.[27]

Consequently, it is found that the technical prong of the domestic industry requirement is satisfied.

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[27] SMC argues without legal citation that inasmuch as it believes that the asserted claims are invalid, "Norgren's domestic industry case must fail even if claim 1 does, in fact, cover Norgren's Quikclamp." SMC Br. at 44. As discussed in detail in the section V of this Initial Determination, patent invalidity may constitute an affirmative defense to an allegation of patent infringement. However, this Tribunal is aware of no law to the effect that patent invalidity constitutes an affirmative defense to a complainant's allegation that a domestic industry exists. In any event, this SMC argument is vague and otherwise unsupported, and is, therefore, not adopted.

B. Economic Analysis

The economic prong of the domestic industry requirement is defined in subsection 337(a)(3) as follows:

> (3) For purposes of paragraph (2), an industry in the United States shall be considered to exist if there is in the United States, with respect to the articles protected by the patent, copyright, trademark or mask work concerned –
>
> (A) significant investment in plant and equipment;
>
> (B) significant employment of labor or capital; or
>
> (C) substantial investment in its exploitation, including engineering, research and development, or licensing.

19 U.S.C. § 1337(a)(3).

The economic prong of the domestic industry requirement is satisfied by meeting the criteria of any one of the three factors listed above.

Norgren argues that it satisfies the economic prong of the domestic industry requirement, and that it has established numerous "expenditures and employments in the United States for the Excelon Series of FRLs that includes the Norgren Quik Clamp." Norgren argues that an industry exists even

it must be based on only the Quik Clamp connector. Norgren Br. at 46-52.

SMC argues that inasmuch as Norgren imports or purchases all of its Quik Clamps, and does not manufacturer the article exploited by the patent in the United States, its claim of a domestic industry must be closely scrutinized. SMC further argues that Norgren has not established that a domestic industry exists with respect to the Quik Clamp. SMC Br. at 44-57.

The Staff concurs with SMC that only Norgren's connector should be included in its economic base. Nevertheless, the Staff argues that the existence of a domestic industry has been established. Staff Br. at 44-49.

As detailed above in this Initial Determination, it has not been shown that the '392 patent covers anything other than a connector. It does not cover the attached FRLs. In addition, Norgren sells its Quik Clamp connectors in combination with FRLs, as well as and individually. In fact, the majority of its connectors are sold alone. Perry Tr. 182; Pusatari Tr. 554. Thus, the Norgren connector is the actual article of commerce at issue, and should form the basis of the economic analysis. *See Certain Modular Structural Systems and Components Thereof* Inv. No. 337-164, USITC Pub. 1668 (1984); *see also Certain Double-Sided Floppy Disk Drives and Components Thereof* Initial Determination, Inv. No. 337- 215, 1986 ITC LEXIS 300, pages 77-82 (in this

instance, the connectors and FRLs do not form a single unit).[28]

On balance, the evidence of record demonstrates the existence of a domestic industry under the economic prong of 19 U.S.C. § 1337(a)(3)(C) (*i.e.*, substantial investment in exploitation, including engineering, research and development, or licensing).

First, it must be acknowledged that Norgren's Quik Clamp manufacturing activities have been carried out in Mexico since 2004. Pomaranski Tr. 130. Despite this fact, Norgren provides engineering support services specifically for the Quik Clamp at its Littleton, Colorado facility, separate and apart from the engineering support services for its Excelon product line. For example, Norgren inspects parts that are made overseas, and also continues to conduct manufacturing and design engineering for its connectors. These activities include customer support such as determining the best configuration for the Quik Clamp and FRL units based on client needs, quality inspection, qualifying vendors, retooling manufacturing equipment, and quality control. Robertson Tr. 47-48, 84-88; CX-32.

Norgren confidential information redacted

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[28] There is no binding precedent that requires Norgren to present a "value-added" comparison between its domestic and foreign activities. *See Certain Male Prophylactic Devices*, Inv. No. 337-546, Comm'n Op. at 43 n.15 (June 29, 2007).

Consequently, Norgren has satisfied both the technical and economic prongs of the domestic industry requirement.

VII. CONCLUSIONS OF LAW

1. The Commission has personal jurisdiction over the parties, and subject-matter jurisdiction over the accused products.

2. The importation or sale requirement of section 337 is satisfied.

3. It is not found that the accused devices infringe any asserted claim of the '392 patent literally or under the doctrine of equivalents.

4. It has not been shown by clear and convincing evidence that the asserted claims are invalid due to obviousness when they are properly construed.

5. A domestic industry exists, as required by section 337.

6. It has not been established that a violation exists of section 337.

VIII. INITIAL DETERMINATION AND ORDER

Based on the foregoing, it is the INITIAL DETERMINATION ("ID") of this Tribunal that no violation of section 337 of the Tariff Act of 1930, as amended, has occurred in the importation into the United States, the sale for importation, or the sale

within the United States after importation of certain connecting devices ("Quick-Clamps") for use with modular compressed air conditioning units, including filters, regulators, and lubricators ("FRL's") that are part of larger pneumatic systems and the FRL units they connect by reason of infringement of one or more of claims 1 through 9 of United States Patent No. 5,372,392.

Further, this Initial Determination, together with the record of the hearing in this investigation consisting of:

(1) the transcript of the hearing, with appropriate corrections as may hereafter be ordered, and

(2) the exhibits received into evidence in this investigation, as listed in the attached exhibit lists, is CERTIFIED to the Commission.

In accordance with 19 C.F.R. § 210.39(c), all material found to be confidential by the undersigned under 19 C.F.R. § 210.5 is to be given *in camera* treatment.

The Secretary shall serve a public version of this ID upon all parties of record and the confidential version upon counsel who are signatories to the Protective Order (Order No. 1) issued in this investigation, and upon the Commission investigative attorney.

To expedite service of the public version, each party is hereby ORDERED to file with the Commission Secretary by no later than February 20,

2008, a copy of this ID with brackets that show any portion considered by the party (or its suppliers of information) to be confidential, accompanied by a list indicating each page on which such a bracket is to be found. At least one copy of such a filing shall be served upon the Administrative Law Judge, and the brackets shall be marked in red. If a party (and its suppliers of information) considers nothing in the ID) to be confidential, and thus makes no request that any portion be redacted from the public version of this ID, then a statement to that effect shall be filed in lieu of a document with brackets.

Pursuant to 19 C.F.R. § 210.42(h), this Initial Determination shall become the determination of the Commission unless a party files a petition for review pursuant to § 210.43(a) or the Commission, pursuant to § 210.44, orders on its own motion a review of the ID or certain issues herein.

Carl C. Charneski
Administrative Law Judge

Issued: February 13, 2008

Appendix D

United States Court of Appeals for the Federal Circuit

2008-1415

NORGREN INC.,

Appellant,

v.

INTERNATIONAL TRADE COMMISSION,

Appellee,

and

SMC CORPORATION and
SMC CORPORATION OF AMERICA,

Intervenors.

On appeal from the United States International Trade Commission in Investigation No. 337-TA-587.

ORDER

NOTE: This order is nonprecedential.

United States Court of Appeals
for the Federal Circuit

ORDER

A petition for rehearing en banc having been filed by the Intervenors, and the matter having first been referred as a petition for rehearing to the panel that heard the appeal, and thereafter the petition for rehearing en banc having been referred to the circuit judges who are in regular active service.

UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for rehearing be, and the same hereby is, DENIED and it is further

ORDERED that the petition for rehearing en banc be, and the same hereby is, DENIED.

The mandate of the court will issue on August 28, 2009.

FOR THE COURT,

Jan Horbaly
Clerk

Dated: 08/21/2009

cc: Carl F. Manthei
Mark B. Rees, Arthur I. Neustadt

NORGREN INC V ITC, 2008-1415
(ITC - 337-TA-587)

Appendix E

No. 06-1291

IN THE
Supreme Court of the United States

AMGEN, INC.,
Petitioner,
v.
HOECHST MARION ROUSSEL, INC.
(now known as AVENTIS PHARMACEUTICALS INC.) and
TRANSKARYOTIC THERAPIES, INC. (now known as
SHIRE HUMAN GENETIC THERAPIES, INC.),
Respondents.

On Petition for Writ of Certiorari to the United States Court of Appeals For the Federal Circuit

BRIEF OF THE AMERICAN BAR ASSOCIATION AS *AMICUS CURIAE* SUPPORTING PETITIONER

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*Table of Contents and Table of Authorities omitted for printing

INTEREST OF THE AMICUS CURIAE[1]

The American Bar Association ("ABA"), with more than 413,000 members, is the leading national organization of the legal profession. Its members come from each of the fifty states, the District of Columbia, and the U.S. territories. Membership is voluntary and includes attorneys in private practice, government service, corporate law departments, and public interest organizations, as well as legislators, law professors, law students, and non-lawyer associates in related fields. ABA members represent the full spectrum of public and private litigants, including plaintiffs and defendants.

The ABA's Section of Intellectual Property Law ("Section") is the world's largest organization of intellectual property professionals, with approximately 19,000 members including lawyers, associates, and law students. In recognition of the importance of patent law, the ABA established the Section in 1894 as the first ABA section to deal with a

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[1] Pursuant to Rule 37.6, *amicus curiae* certifies that no counsel for a party authored this brief in whole or in part and that no person or entity, other than *amicus*, its members, or its counsel, has made a monetary contribution to the preparation or submission of this brief. The parties have consented to the filing of this brief.

Neither this brief nor the decision to file it should be interpreted to reflect the views of any judicial member of the American Bar Association. No inference should be drawn that any member of the Judicial Division Council has participated in the adoption or endorsement of the positions in this brief. This brief was not circulated to any member of the Judicial Division Council prior to filing.

special branch of the law. The Section has contributed significantly to the development of the American system for the protection of intellectual property rights. The Section is composed of lawyers of diverse backgrounds who represent patent owners, accused infringers, individual inventors, large and small corporations, universities and research institutions, all across a wide range of technologies and industries.

At its 2004 Annual Meeting, the ABA House of Delegates adopted a policy that supports appellate review under the *de novo* standard of the ultimate issue of claim construction but which reserves appellate review under the clearly erroneous standard of any underlying findings of fact made by a trial court in connection with construing a claim term.[2] The ABA developed this policy based on its belief that the Federal Circuit's existing practice of reviewing fact-intensive patent claim construction issues without any deference to the district court's findings on the underlying or subsidiary facts does not properly account for complexities inherent in these issues. *See, e.g., Phillips v. AWH Corp.*, 415 F.3d 1303, 1332 (Fed. Cir. 2005) (en banc), cert. denied, 126 S. Ct. 1332 (2006) (Mayer, J., dissenting) ("the nature of the questions underlying claim construction illustrate that they are factual . . . These subsidiary determinations are specific, multifarious and not susceptible to generalization."). One consequence of the Federal Circuit's plenary *de novo*

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[2]The ABA House of Delegates' adoption of this position is recorded at http://www.abanet.org/leadership/2004/annual/dailyjournal/302.doc.

review of these fact-intensive issues, as one would expect, has been a high reversal rate.[3] This high reversal rate has significantly increased the cost of litigation by frequently requiring relitigation of issues following a reversal,[4] or at the very least forcing parties to put in proof and make arguments in the alternative because of the uncertainty of the final claim construction.[5]

The ABA's views on the principle of appellate review of factual conclusions of district courts in patent cases have been developed over a long period of time by practitioners directly involved in these cases. Having had considerable experience with the impact that the Federal Circuit's no-deference rule

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[3] *See, e.g.*, Kimberly A. Moore, *Markman Eight Years Later: Is Claim Construction More Predictable?*, 9 Lewis & Clark L. Rev. 231, 232 (2005) (citing 34.5% reversal rate for 1996-2003); *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448, 1476 (Fed. Cir. 1998) (Rader, J., dissenting) (38.3% reversal rate per court's 1997 official statistics).

[4] *See, e.g., Elf Atochem North Am., Inc. v. Libbey-Owens-Ford Co.*, 894 F. Supp. 844, 857, (D. Del. 1995) ("[I]n spite of a trial judge's ruling on the meaning of disputed words in a claim, should a three-judge panel of the Federal Circuit disagree, the entire case could be remanded for retrial on [a] different [claim interpretation].")

[5] "A Section White Paper: Agenda for 21st Century Patent Reform," ABA Section of Intellectual Property Law, revised February 20, 2007, located at http://www.abanet.org/intelprop/home/PatentReformWP.pdf at 38-39. This White Paper was developed by a task force of experts within the Section to address a number of patent reform issues. The White Paper was reviewed by all sections and divisions of the ABA without objection.

has had on businesses and individuals across a wide range of technologies and industries, the ABA believes its insights may be of assistance to the Court.

REASONS FOR GRANTING THE PETITION

I. Granting the Petition Will Present an Opportunity for the Court to Provide Needed Guidance on the Proper Role of Appellate Courts When Reviewing Underlying Findings of Fact in Claim Construction Rulings.

This Court in *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388 (1996), explained that claim construction involves a mixed issue that "falls somewhere between a pristine legal standard and a simple historical fact." *Markman* held that the task of construing claims in the first instance falls to the trial judge, but left open the question of whether an appellate court should give deference to a trial court's findings on underlying or subsidiary facts that might arise in construing the claims. *Id.*, 517 U.S. at 384 n. 10.

In *Cybor*, the Federal Circuit acknowledged the fact/ law dichotomy discussed in *Markman*, but concluded that claim construction is "a purely legal question" it should review "*de novo* on appeal, including any allegedly fact-based questions relating to claim construction." *Cybor*, 138 F.3d at 1456.

The Federal Circuit granted a rehearing *en banc* in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005), cert. denied, 126 S. Ct. 1332 (2006), to address several questions, including whether it should

"accord any deference to any aspect of trial court claim construction rulings." The court invited briefs *amicus curie*, and the ABA submitted a brief articulating its position that underlying findings of fact should be reviewed under a clearly erroneous standard. Ultimately, the *en banc* panel decided not to resolve this question. *Phillips*, 415 F.3d at 1328.

The *Cybor* approach gives insufficient recognition to the proper competencies of the trial and appellate courts. As this Court has recognized, district courts are better situated to apply fact-dependent legal standards. *See Cooter & Gell v. Hartmarx Corp.*, 496 U.S. 384, 402 (1990) ("Familiar with the issues and the litigants, the district court is better situated than the court of appeals to marshal the pertinent facts and apply the fact-dependent legal standard."); *see also Salve Regina College v. Russell,* 499 U.S. 225, 233 (1991) ("deferential review of mixed questions of law and fact is warranted when it appears the district court is 'better positioned' than the appellate court to decide the issue in question or that probing appellate scrutiny will not contribute to the clarity of legal doctrine"). District court findings on fact-intensive inquiries underlying claim constructions, *Phillips*, 415 F.3d at 1331, should be given deference for precisely these reasons.

These types of concerns led to the amendment of Rule 52(a), Fed. R. Civ. P., in 1985 to make clear that all findings of fact made by the trial court, whether or not they are based on credibility determinations, must be reviewed for clear error. The Advisory Committee explained: "To permit courts of appeals to share more actively in the fact-finding function would

tend to undermine the legitimacy of the district courts in the eyes of litigants, multiply appeals by encouraging appellate retrial of some factual issues, and needlessly reallocate judicial authority."

II. *De Novo* Review of Claim Constructions Has Increased Uncertainty and Expense in Patent Litigation.

The *de novo* review of all aspects of claim constructions under *Cybor* has contributed to a substantial reversal rate of district court rulings by the Federal Circuit.[6] Members of the ABA have observed that instead of having the intended effect of "providing national uniformity to the construction of a patent claim," *Cybor*, 138 F.3d at 1455, this approach instead has introduced into patent litigation considerable inefficiencies, unpredictability, and added expense.[7]

A. Appellate Review of Findings of Fact for Clear Error Would Increase Predictability and Reduce Litigation Cost.

Reviewing a district court's ultimate claim construction *de novo* and the underlying findings of fact for clear error will decrease the reversal rate at the Federal Circuit.[8] A lower reversal rate would

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[6] See note 3 *supra*.

[7] "A Section White Paper: Agenda for 21st Century Patent Reform," ABA Section of Intellectual Property Law, revised February 20, 2007, located at http://www.abanet.org/intelprop/home/PatentReformWP.pdf at 38-39.

[8] *Id.*

help reduce patent litigation costs by limiting instances of relitigation and the use of inefficient trial strategies that account for the likelihood of reversal, which in turn would benefit both patentees and accused infringers alike.[9]

B. Affording Deference to Findings of Fact Is Consistent With the Federal Circuit's Goal of Promoting Uniformity in the Patent Law.

Affording deference to underlying findings of fact by a trial court would not impede uniformity. Ultimately, claim construction is a question of law. *Markman*, 517 U.S. at 390. Principles of *stare decisis*,[10] and in some instances issue preclusion, will promote uniformity in circumstances where different district courts are construing the same terms in the same patents. Reviewing underlying questions of fact for clear error will reflect the competencies of the trial and appellate courts and will appropriately allocate judicial resources.

CONCLUSION

For the reasons set forth above, the ABA respectfully submits the petition for writ of *certiorari* should be granted.

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[9] *Id.*

[10] *See, e.g., Markman*, 517 U.S. at 391 ("treating interpretive issues as purely legal will promote (though it will not guarantee) intrajurisdictional certainty through the application of *stare decisis* on those questions not yet subject to intrajurisdictional uniformity under the authority of the single appeals court.").

Respectfully submitted,

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Appendix F

No. 06-1291

IN THE
Supreme Court of the United States

AMGEN, INC.,
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v.

HOECHST MARION ROUSSEL, INC.
(now known as AVENTIS PHARMACEUTICALS, INC.)
and
TRANSKARYOTIC THERAPIES, INC.
(now known as HUMAN GENETIC THERAPIES, INC.),
Respondents.

On Petition for Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

BRIEF OF AMICUS CURIAE FEDERAL CIRCUIT BAR ASSOCIATION IN SUPPORT OF PETITIONER

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STATEMENT OF INTEREST OF *AMICUS CURIAE*

The Federal Circuit Bar Association ("FCBA") is a national organization consisting of approximately 2,400 attorneys whose practice concerns the United States Court of Appeals for the Federal Circuit in all aspects of its jurisdiction. The FCBA offers a forum for dialogue between the bar and the judges of the Federal Circuit. One of the purposes of the FCBA is to submit briefs *amicus curiae* on matters affecting practice before the Federal Circuit and lower tribunals.[1]

Pursuant to Supreme Court Rule 37.2(a), the FCBA has conferred with the parties regarding the filing of this brief *amicus curiae*, and both parties have consented to its filing. Evidence of the written consent of the parties has been filed separately.

The FCBA respectfully submits this brief in support of the Petition for Certiorari filed by Petitioner Amgen Inc. ("Amgen"). The FCBA expresses no opinion on the merits of the underlying legal dispute. It supports Amgen's petition because

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[1] Pursuant to Supreme Court Rule 37.6, the FCBA states that no counsel for a party authored this brief in whole or in part. No person or entity, other than *amicus curiae*, its members, or its counsel, made any monetary contribution to the preparation of the brief.

Counsel for the FCBA in this matter represents Amgen in certain non-litigation matters unrelated to patents. The FCBA notes that its position on the issues addressed in this brief has been a matter of public record for some time. When the Federal Circuit invited briefing on this issue in connection with its *en banc* rehearing of *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005), the Federal Circuit Bar Association filed a brief taking precisely the position taken in this brief.

its members believe that the Federal Circuit's decision in *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448 (Fed. Cir. 1998) ("*Cybor*") has negatively affected the litigation of patent rights and the patent system as a whole and should be overruled.

SUMMARY OF ARGUMENT

1. The Supreme Court should grant the Petition for Writ of Certiorari in order to review the Federal Circuit's holding in *Cybor*, followed in this case, that claim construction is subject to *de novo* review. That rule has produced an unacceptably high appellate reversal rate of claim constructions, spawning uncertainty among patent litigants, postponing resolution of patent cases, and discouraging settlement.

2. The Federal Circuit's rationale for *de novo* review rests on the premise that claim construction does not involve determinations of fact. This premise is incorrect, illogical, and inconsistent with this Court's unanimous opinion in *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996) ("*Markman II*"). Notwithstanding the District Court's assertion that the enormous volume of technical evidence in which it has been immersed during ten years of fact-intensive litigation did not in any way inform its interpretation of the disputed claim terms, the appropriateness of the *Cybor* rule is squarely at issue in this case.

ARGUMENT

This Court should grant certiorari pursuant to Supreme Court Rule 10(c). In *Amgen, Inc. v. Hoechst Marion Roussel, Inc.*, 457 F.3d 1293 (Fed. Cir. 2006), the Federal Circuit decided an important question of federal law in a way that conflicts with relevant decisions of this Court. In particular, the Federal Circuit applied its previous decision in *Cybor* that, because claim construction does not rest on determinations of fact, it is a matter of law reserved exclusively for the court, and therefore reviewed *de novo* on appeal.

The Federal Circuit has refused to reconsider *Cybor* despite widespread recognition among practitioners—and even a majority of the Federal Circuit's own judges—that *Cybor* is seriously flawed. In the nine years since the Federal Circuit decided *Cybor*, *de novo* review of claim construction has rendered patent litigation less predictable, spawned unnecessary legal conflict, and discouraged settlement. The FCBA further submits that the requirement of *de novo* review of claim construction rests on an erroneous legal rationale that conflicts with this Court's decision in *Markman II* and with established principles of appellate review embodied in Federal Rule of Civil Procedure 52(a).

For these reasons, the FCBA respectfully requests that this Court review the Federal Circuit's holding in *Cybor* that all aspects of claim construction are subject to *de novo* review.

The FCBA is conscious that this Court relies on the Federal Circuit for the day-to-day development and administration of patent law. *See, e.g., Warner-*

Jenkinson Inc. v. Hilton Davis Chem. Co., 520 U.S. 17, 40 (1997). However, the FCBA respectfully asks this Court to review the *Amgen* decision because the Federal Circuit is unwilling to revisit the *Cybor* rule *en banc*, notwithstanding widespread recognition on and off the Federal Circuit that *de novo* review of claim construction has impeded the orderly resolution of patent disputes and rests on an erroneous legal foundation. *See Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (declining to reconsider *Cybor* after requesting briefing on the issue).

I. *DE NOVO* REVIEW OF CLAIM CONSTRUCTION HAS LED TO AN UNACCEPTABLY HIGH REVERSAL RATE, FOSTERING UNPREDICTABILITY, POSTPONING FINALITY, AND DISCOURAGING SETTLEMENT.

Before the Federal Circuit decided *Cybor*, panels of that court routinely acknowledged that claim construction was firmly rooted in factual inquiry. For example, the Federal Circuit counseled in one of the leading pre-*Markman* cases that "[i]n a patent case involving complex scientific principles, it is particularly helpful to see how those skilled in the art would interpret the claim." *Moeller v. Ionetics, Inc.*, 794 F.2d 653, 657 (Fed. Cir. 1986). Although the *Moeller* court could not say that eliciting expert testimony from those skilled in the art was "a requirement in all cases," it nevertheless concluded that "the trial judge's failure to allow such testimony was an abuse of discretion." *Id. See also Palumbo v. Don-Joy Co.*, 762 F.2d 969, 976 (Fed. Cir. 1985) ("[W]hen the meaning of a term in the claim is

disputed and extrinsic evidence is necessary to explain that term, then an underlying factual question arises, and construction of the claim should be left to the trier or jury under appropriate instruction."); *Bio-Rad Lab., Inc. v. Nicolet Instrument Corp.*, 739 F.2d 604, 613 (Fed. Cir. 1984) (The issue of infringement turned on "whether reasonable jurors, after reviewing all the evidence, could have interpreted the claims to include" the allegedly infringing activity.).[2]

When the Federal Circuit ruled in *Cybor* that claim construction was subject to *de novo* review, it was with the expectation that plenary review would promote greater predictability, and therefore early settlement, by providing finality with respect to the meaning of litigated claims. Concurring in *Cybor*, Judge Plager observed, "[o]ur purpose is to improve the process of patent infringement litigation for the

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[2] As these statements suggest, the interpretation of disputed claim terms was often assigned to the jury. *See, e.g., Tol-O-Matic, Inc. v. Proma Produkt-Und Mktg.*, 945 F.2d 1546, 1552 (Fed. Cir. 1991) ("When the question of infringement turns on the interpretation of the claim, we review whether a reasonable jury could have interpreted the claim in a way that supports its finding on the question of infringement."); *McGill, Inc. v. John Zink Co.*, 736 F.2d 666, 672 (Fed. Cir. 1984) (In the event that "the meaning of a term of art in the claims is disputed and extrinsic evidence is needed to explain the meaning, construction of the claims could be left to a jury."). *See also* William H. Burgess, Comment: *Simplicity at the Cost of Clarity: Appellate Review of Claim Construction and the Failed Promise of Cybor*, 153 U. Pa. L. Rev. 763, 769-71 (2004) (describing the "mixed standard of review" employed by the Federal Circuit in the pre-Markman era). The Federal Circuit Bar Association does not suggest that claim construction should be a matter for the jury.

benefit of patentees and their competitors, and ultimately the public." *Cybor*, 138 F.3d at 1463. Whether the "new regime" would prove beneficial "in the long run" remained to be seen, Judge Plager acknowledged, "[b]ut it may be some time before we have enough experience with 'Markman hearings' and with [*de novo*] appellate review to draw any empirically sound conclusions." *Id.*

Our members have now litigated patent claims under the *Cybor* rule for nine years. As the result of this experience, the FCBA has concluded that, not only has *de novo* review of claim construction failed to "improve the process of patent litigation"; it has spawned an unacceptably high reversal rate and, with it, endemic uncertainty among litigants and practitioners.[3] This conclusion is well supported by empirical data. Scholarly analyses of the Federal Circuit's post-*Markman II* review of claim constructions place the reversal rate between 35% and 44%.[4] Further, although the reversal rate did

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[3] Dissenting in the Federal Circuit's denial of rehearing *en banc*, Chief Judge Michel identified four practical problems with the *Markman-Cybor* regime:

> (1) a steadily high reversal rate; (2) a lack of predictability about appellate outcomes, which may confound trial judges and discourage settlements; (3) loss of the comparative advantage often enjoyed by the district judges who heard or read all of the evidence and may have spent more time on the claim construction than we ever could on appeal; and (4) inundation of our court with the minutia of construing numerous disputed claim terms (in multiple claims and patents) in nearly every patent case.

[4] See Kimberly A. Moore, Markman Eight Years Later: Is Claim

begin to decline in the wake of *Markman II*, it rose in each of the five years following the Federal Circuit's decision in *Cybor*.[5]

As a result, *Cybor* has produced the opposite of its desired effect. Far from encouraging authoritative early construction of patent claims, *de novo* review instead defers until the appellate decision the point at which litigants and practitioners can reliably assess their likelihood of prevailing. At that point, the opportunity for early resolution is long past. As Judge Rader explains, the "Markman I regime means that the trial court's early claim interpretation provides no early certainty at all, but only opens the bidding. The meaning of a claim is not certain until nearly the last step in the process—decision by the Court of Appeals for the Federal Circuit." *Cybor*, 138 F.3d at 1476 (Rader, J., dissenting). One district judge candidly explained that "lawyers know litigation will be a long haul because what the district

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Construction More Predictable?, 9 Lewis & Clark L. Rev. 231, 233 (2005) (35%); Christian A. Chu, Empirical Analysis of the Federal Circuit's Claim Construction Trends, 16 Berkeley Tech. L.J. 1075, 1104 (2001) (44%); Gretchen Ann Bender, Uncertainty and Unpredictability in Patent Litigation: The Time is Ripe for a Consistent Claim Construction Methodology, 8 J. Intell. Prop. L. 175, 207 (2001) (40%). As then-Professor Moore noted, the two latter studies do not account for the Federal Circuit's Rule 36 summary affirmances. Moore, supra, at 234. See also Cybor, 138 F.3d at 1476 (Rader, J., dissenting) (noting that the Federal Circuit reversed in whole or in part 53% of appealed claim constructions, according to the Federal Circuit's official 1997 statistics, and citing studies showing a 40% reversal rate for claim construction since Markman I).

[5] *Id.* at 246.

court says ultimately will not determine the issue." Hon. Kathleen M. O'Malley, Hon. Patti Saris, and Hon. Ronald H. White, *The Past, Present and Future of the Federal Circuit: A Panel Discussion: Claim Construction from the Perspective of the District Judge*, 54 Case W. Res. L. Rev. 671, 682 (2004) (statement of Judge Saris).[6] Another district judge cited a fear among practitioners that the Federal Circuit's high reversal rate induced trial judges to grant summary judgment even when there are disputed facts, reasoning, "I do not want to try this case twice, [so I'll] just send it up. Let the Federal Circuit tell me whether I got the claim construction wrong by making the infringement decision on the summary judgment." *Id.* at 687 (statement of Judge O'Malley).[7]

This case presents an important opportunity to stem the rising reversal rate and promote greater

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[6] Judge Saris went on to note a recent increase in preliminary injunction motions in patent cases, "so that parties can appeal . . . and get a quick read on the claim construction. . . . Patent litigators want to get that claim construction up to the CAFC." *Id.* Judge Rader has similarly observed that as a result of the high reversal rate, "the trial court becomes a ticket to the real center stage, the Court of Appeals for the Federal Circuit." *Cybor*, 138 F.3d at 1476 (Rader, J., dissenting).

[7] This dynamic unnecessarily taxes judicial resources and contributes to the spiraling cost of patent litigation. The American Intellectual Property Law Association reports that the average cost of litigating a patent infringement suit when more than $25 million is at stake surged from less than $3 million in 2001 to $4.5 million in 2005—an increase of more than 50% in just four years. American Intellectual Property Law Association, *Report of the Economic Survey 2005* 23 (2005).

predictability in, and earlier resolution of, patent cases. On account of these important pragmatic considerations alone, this Court should grant Amgen's Petition for Certiorari.

II. THE FEDERAL CIRCUIT'S RATIONALE FOR *DE NOVO* REVIEW OF CLAIM CONSTRUCTION IS LEGALLY INCORRECT AND INCON- SISTENT WITH THIS COURT'S UNANIMOUS OPINION IN *MARKMAN II*

A. The Federal Circuit's Rationale for *De Novo* Review Rests on the Faulty Premise that Claim Construction Does not Involve Determinations of Fact

When a trial court construes a disputed claim term, "the focus is on the objective test of what one of ordinary skill in the art at the time of the invention would have understood the term to mean." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 986 (Fed. Cir. 1995) ("*Markman I*"). As this Court and several judges on the Federal Circuit have observed, this is an inherently factual inquiry. During Markman hearings, "which are often longer than jury trials," explained Judge Mayer, parties vigorously dispute

> who qualifies as one of ordinary skill in the art; the meaning of patent terms to that person; the state of the art at the time of the invention; contradictory dictionary definitions and which would be consulted by the skilled artisan; the scope of specialized terms; the problem a patent was solving; what is related or pertinent art; whether a construction was disallowed during prosecution; how one of skill in the art would

> understand statements during prosecution; and on and on.

Phillips, 415 F.3d at 1333 (Mayer, J., dissenting from the denial of rehearing *en banc*).

To patent practitioners, it is uncontroversial to assert that claim construction often requires the trial court to resolve underlying issues of fact. However, the *Cybor* rule perpetuates a fiction: that trial courts rely on extrinsic evidence only to understand the technology, but not to determine the meaning of claims. As the Federal Circuit declared in *Markman I*, while extrinsic evidence

> may be necessary to inform the court about the language in which the patent is written[,] . . . [it] is not for the purpose of clarifying ambiguity in claim terminology. It is not ambiguity in the document that creates the need for extrinsic evidence but rather the unfamiliarity of the court with the terminology of the art to which the patent is addressed.[8]

Markman, 52 F.3d at 986. *See also Cybor*, 138 F.3d at 1454.

This rationale defies experience and common sense. Trial judges routinely hear many hours of expert testimony and review extensive documentary evidence in the course of determining how a person of

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[8] The Federal Circuit's exceptionally high reversal rate for claim construction, *see supra*, belies its assertion in *Markman I*, *Cybor*, and *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576 (Fed. Cir. 1996), that claim terms themselves typically are not ambiguous and thus can be interpreted on the basis of the intrinsic record alone.

ordinary skill in the art would have interpreted a claim term at the time of the invention. In the present case, as Chief Judge Michel explained, the District Court's claim construction was "well grounded in . . . evidence" gleaned from 32 days of trial, "extensive findings of fact and conclusions of law," and tutorials from an M.I.T. Professor whom the District Court appointed as a technical advisor. *Amgen*, 457 F.3d at 1318 (Michel, C.J., dissenting).[9] Rarefied theoretical distinctions between understanding the technology and clarifying ambiguity in claim terminology notwithstanding, determining the meaning of a disputed term to a person of ordinary skill in the art at the time of invention is an inherently factual enterprise.[10]

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[9] *See also Phillips*, 415 F.3d at 1334 (Mayer, J., dissenting) ("In order to reconcile the parties' inconsistent submissions and arrive at a sound interpretation, the district court is required to sift through and weigh volumes of evidence.").

[10] The Federal Circuit's admonition that, in construing patent claims, trial courts typically can and should eschew "extrinsic" evidence in favor of the "intrinsic" record, is premised on an implausibly categorical distinction between "extrinsic" and "intrinsic" evidence. Specifically, the Federal Circuit cordons off evidence that is included within the patent's file history—the claim, specification, and prosecution history— and labels it "intrinsic," on the theory that such evidence constitutes the "public record" of the patented invention. *Vitronics*, 90 F.3d at 1584. But why should a court's reliance on prior art that is part of the file history to define the scope of a claim qualify as pure legal construction, while its consideration of other prior art constitutes fact-finding? Yet it is this bright-line distinction that the Federal Circuit invokes to support its position that claim construction is devoid of fact-finding.

As recently as 2005, the Federal Circuit refused to revisit the *Cybor* rule *en banc*, even after requesting briefing from the parties on whether it is "appropriate . . . to accord any deference to any aspect of trial court claim construction rulings." *Phillips*, 415 F.3d at 1328. Because the Federal Circuit has inexplicably refused to revisit *Cybor* despite the inclination of many of its judges to do so,[11] and because the *Cybor* rule undermines the orderly and timely resolution of patent cases, this Court should grant the Petition for Certiorari.

B. *De Novo* Review of Claim Construction is Inconsistent with *Markman II*

In *Markman II*, this Court concluded that, by virtue of judges' "training and discipline," they, rather than juries, are best positioned to undertake the kind of highly technical and time-consuming analysis that often is required to construe a patent claim. The decision hinged not on "history" or

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[11] In this and other cases, at least five of the twelve sitting Federal Circuit judges have directly criticized *de novo* review of claim constructions. *See, e.g., Amgen*, 469 F.3d at 1040 (dissent of Judge Michel, joined by Judge Rader); *id.* at 1041 (dissent of Judge Newman); *id.* at 1044 (dissent of Judge Rader); *id.* at 1045 (dissent of Judge Moore); *Cybor*, 138 F.3d at 1463-66 (concurrence of Judge Mayer, joined by Judge Newman); *id.* at 1473-73 (dissent of Judge Rader, joined by Judge Newman); *id.* at 1478-81 (additional views of Judge Newman, joined by Judge Mayer); *Phillips*, 415 F.3d at 1330-34 (dissent of Judge Mayer, joined by Judge Newman). At least four others have implied dissatisfaction with *de novo* review, *Amgen*, 469 F.3d at 1043(concurrence of Judge Laurie), or indicated a willingness to reconsider certain aspects of *Cybor*. *See, e.g., id.* at 1045 (concurrence of Judge Gajarsa, joined by Judges Linn and Dyk); *Phillips*, 415 F.3d at 1330 (dissent of Judge Lourie).

"precedent," but on "functional considerations" of the respective institutional competencies of judges and juries to "define terms of art." *Markman II*, 517 U.S. at 388. This Court explained:

> The decision maker vested with the task of construing the patent is in the better position to ascertain whether an *expert's proposed definition* fully comports with the specification and claims and so will preserve the patent's internal coherence. We accordingly think there is sufficient reason to treat construction of terms of art like many other responsibilities we cede to a judge in the normal course of trial, *notwithstanding its evidentiary underpinnings.*

Markman II, 517 U.S. at 390 (emphasis added).

Three points bear special emphasis. First, this passage explicitly recognizes the "evidentiary underpinnings" of claim construction. Second, this Court presumes that, in the course of construing a claim, judges will weigh the "proposed definition[s]" of experts. Third, the passage highlights the practical, rather than legal, reasons to allocate claim construction to the court. Claim construction falls to judges not because it is a purely legal activity, but because it is best performed by a judge.

Notwithstanding the pragmatism of *Markman II*, the Federal Circuit has taken this Court's pronouncement that claim construction is a matter for the court, stripped it of its context, and declared that claim construction is a pure matter of law that must be reviewed *de novo*. In so doing, the Federal Circuit has overlooked this Court's repeated

acknowledgement in *Markman II* that claim construction is fact-dependent.[12] Judge Newman noted the inconsistency between the Federal Circuit's approach and this Court's opinion in her dissent in *Cybor*:

> In *Markman [I]* the *en banc* court took the position that in patent cases, unlike any other area of law, a disputed question of the meaning, scope, and usage of terms of technologic art is not a question of fact, or even of law based on underlying fact, but is pure law. However, the Supreme Court has relieved us of adherence to this fiction, by its recognition of the factual component of claim interpretation. Further, the Court's affirmation that claim interpretation "is exclusively within the province of the court," [citation omitted], did not shut out the trial judge along with the jury.

Cybor, 138 F.3d at 1480 (Newman, J., offering "additional views"). This Court should therefore grant certiorari in order to assess the compatibility of the *Cybor* rule with its opinion in *Markman II*.

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[12] As the Petitioner and several Federal Circuit judges have observed, this Court noted throughout *Markman II* that claim construction was in fact a "mongrel practice," *Markman II*, 517 U.S. at 390, that "falls somewhere in between a pristine legal standard and a simple historical fact." *Id.* at 388.

C. Notwithstanding the District Court's Purported "Disavowal" of Reliance on Factual Determinations, the Appropriateness of the *Cybor* Rule is Ripe for Review

Respondents contend that this Court should deny certiorari on the ground that, because the District Court's claim construction did not "rest on any 'findings of fact,'" the appropriateness of the *de novo* standard of review applied by the Federal Circuit is not at issue. Resp. at 1. They refer, in particular, to Judge Young's repeated "disavowal" that he relied on extrinsic evidence in construing the claim. Respondents misunderstand the District Court's opinion.

The Federal Circuit instructs trial judges that they may resort to extrinsic evidence, including prior art and expert testimony, to understand the technology embodied in the patent, but not to interpret the scope of a patent claim. If that distinction strikes this Court as conceptually difficult, consider it from the perspective of a judge who has benefited from the tutorials of a technical advisor, heard testimony from multiple experts, reviewed reams of documentary evidence, and presided over hundreds of trial hours. "What happens when that learning influences a trial judge's interpretation of the claim terms?" asks Judge Rader. "Are trial judges supposed to disguise the real reasons for their interpretation?" *Cybor*, 138 F.3d at 1474 (Rader, J., dissenting).

While Judge Young indicated in his opinion that the extensive technical education he received during

the course of the litigation did not inform his interpretation of the disputed claim term, his opinion also suggests that such professions may represent little more than a compulsory nod to the *Cybor* rule. Judge Young described an "apparent conundrum" created by the Federal Circuit's extrinsic evidence rule:

> [I]t discourages resort to extrinsic evidence while at the same time urging courts to begin claim construction by considering the plain and customary meaning of a term as understood by one skilled in the art. How does a Court decipher the plain and customary meaning of a term as understood by one skilled in the art without resorting to extrinsic evidence about how one skilled in the art would construe the term?

Amgen, Inc. v. Hoechst Marion Roussel, Inc., 339 F. Supp. 2d 202, 226 n.23 (D. Mass. 2004).

Judge Young appeared skeptical about the plausibility of simply "drawing a line between cognitive and investigative tasks," *see id.*, but ultimately concluded: "The Federal Circuit has decided, however, that . . . [t]he task of claim construction falls on the 'cognitive' side of the divide between expanding and applying cognitive capacities, on the one hand, and investigating facts, on the other." *Id.* Therefore, he characterized his construction of the disputed term as the product of a purely legal analysis of intrinsic evidence. As Judge Rader remarked of Judge Young's opinion, "[d]istrict court judges have learned to disclaim any reliance on

expert testimony." *Amgen*, 469 F.3d at 1044 (Rader, J., dissenting).[13]

The Federal Circuit defines what district courts do when they construe patent claims as a purely legal exercise that is unburdened by extrinsic evidence. Because district judges, including Judge Young, are mindful of this jurisprudence and draft their claim construction opinions accordingly, it is unreasonable to expect any claim construction opinion to pose an explicit challenge to *Cybor*, regardless of its actual basis. For this reason, the *Cybor* regime will continue without review unless this Court looks past the District Court's characterization of its approach to consider instead how the Judge Young actually determined what the disputed claim term meant to a person skilled in the art at the time of the invention. In short, an objective reading of the District Court's opinion indicates that the *Cybor* rule is ripe for review.

CONCLUSION

For the foregoing reasons, amicus curiae Federal Circuit Bar Association respectfully requests that this Court grant the Petition for Writ of Certiorari.

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[13] We might also ask, as Judge Rader did in *Cybor*, "[h]ow will this perverse incentive to 'hide the ball' improve appellate review?" *Cybor*, 138 F.3d at 1474 (Rader, J., dissenting).

Respectfully submitted,

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Dated: April 25, 2007

Appendix G

LEXSEE 2007 U. ILL. J.L. TECH. & POL'Y 1

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2007 U. Ill. J.L. Tech. & Pol'y 1

LENGTH: 12207 words

ARTICLE: THE PATENT LITIGATION PREDICAMENT IN THE UNITED STATES

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SUMMARY:

... A de novo standard of review is what the Federal Circuit announced in its 1995 en banc decision in Markman as to district judges' claim construction determinations. ... Therefore, we district judges now fully understand that we must follow the algorithmic procedure of looking first to the patent and its claims, specifications, prior art references, and drawings

depicting the preferred embodiments; and then turning to the prosecution history, which is the give-and-take with the Patent and Trademark Office ("PTO") during the patenting process; and finally turning to sources extrinsic to the patenting process such as dictionaries, the testimony of experts (who are persons skilled in the relevant art, into whose shoes we judges are to figuratively step in interpreting claim language), or the testimony of the inventor (even though the inventor is supposed to have the prerogative to be the lexicographer as to the patent's terms). ... To comprehensively address the inaccuracy, unpredictability, and high costs of patent litigation, the first remedy that I support as part of the solution to the patent litigation predicament, along with other strategies, is a review period following the issuance of a patent called a "post-grant review" proceeding, during which third parties may challenge the grant of a patent. ... The post-grant review proceeding would provide third parties opposed to the grant of the patent a specified window of time from the date a patent is issued to challenge the patent before the PTO in a forum with limited discovery. ... Allowing the PTO this opportunity to make corrections to newly issued patents would protect potential litigants who are negatively affected by a patent's issuance, while still allowing for the patentee to be heard further within the PTO through an adversarial administrative process. ... Remedying the high reversal rate by the Federal Circuit of district court judges on claim constructions necessitates addressing the intertwined issues of the predictability of outcomes and the accuracy of decisions. ... Additionally, this pilot program may

result in greater efficiency for deciding patent cases because judges with greater expertise in patent law would more quickly resolve patent matters. ... Conclusion The implementation of all four of these proposals - PTO post-grant review, the Federal Circuit's changing of the standard of review and providing more guidance, district judges' increased use of special masters, and H.R. 34's pilot patent program of designated district judges - would move us forward in resolving the complicated patent litigation predicament that we have in the United States.

TEXT:

[*1] Something has to change when your boss, upon reviewing your work, continues to tell you year after year that you are doing your job incorrectly about one-third to one-half of the time, and your customers continue to tell you their costs are too high. That is the predicament in which we United States district court judges have collectively found ourselves during the past decade when presiding over patent litigation. Five years ago, I gave a keynote address during the 2002 International Intellectual Property Conference in Chicago in which I expressed my concerns on this topic as well as my views on trial-level specialization in patent cases, as previously reported in this publication. n1

As an updated expression of my continuing concerns about the predicament, this article will describe its root bases, discuss contributing factors, and present possible solutions, as well as potential remedies, that are either underway or have been proposed to help resolve the patent litigation predicament in the United States.

The United States Court of Appeals for the Federal Circuit, headquartered in Washington, D.C., is the only Article III appellate court which has its jurisdiction defined by subject matter and not geography. n2 It is the appellate court that reviews all appeals involving claims of patent infringement from all of the United States district courts across the country. n3

[*2] Depending on what statistics and whose opinion one looks at, the reversals by the Federal Circuit of district court decisions on patent claim construction are nothing of which to be proud. The rate of these reversals adds to the uncertainty in patent litigation. In 1998, two years after the United States Supreme Court's opinion in Markman v. Westview Instruments, Inc. n4 affirming the Federal Circuit's decision, n5 Federal Circuit Judge Randall Rader, in his concurrence in the en banc decision Cybor Corp. v. FAS Technologies, Inc., n6 opined that from his vantage point it appeared the reversal rate regarding patent claim construction by district court judges was "hovering near 50%" for the cases decided during the approximately two and a half year period of April 1995 through November 1997. n7 After that startling revelation from a highly respected appellant jurist, Professor Kimberly Moore, now herself a judge of the United States Court of Appeals for the Federal Circuit, undertook a detailed analysis of all Federal Circuit claim construction cases from April 23, 1996, (the day the Supreme Court issued its decision in Markman) through December 31, 2000, and concluded "that district judges improperly construe patent claim terms in 33% of the cases appealed to the Federal Circuit." n8 Another scholar, Christian A.

Chu, studied Federal Circuit cases between January 1, 1998, and April 30, 2000. n9 Chu found that the reversal rate was 44%. n10 Other similar studies placed the reversal rate around 40%. n11

The Court of Appeals for the Federal Circuit does not itself report statistics on the number of reversals based on erroneous claim construction by the district judges, but the Federal Circuit reported that during the twelve-month period ending March 31, 2006, of all the 381 cases before that court that were appealed from the district courts and were terminated by a decision of judges of the Federal Circuit, only 14% resulted in reversal. n12 The average [*3] reversal rate of district court decisions appealed to the regional courts of appeals for the year ending March 31, 2006, was 9.5%. n13

If we United States district court judges get it right 90% of the time on average in all other types of cases, why are we not better at construing patent claim language? I know that in each patent case over which I have presided for the more than two decades I have been on the federal district bench, I have done my best to get it right. I also know, as the chief judge of my district court, that my colleagues in Chicago do so as well, and I am sure my other district court colleagues across the country are equally conscientious. Despite our individual efforts, however, the fact remains that if a party appeals our claim construction rulings, there is almost a 40% chance that our rulings will be reversed.

Despite the early predictions after the Markman decision that district judges' decisions on claim construction would result in greater certainty on the

soundness of the district judges' decisions, n14 the reversal rate appears to persist and remains "steadily high." n15 The resulting uncertainty at the district court level encourages disappointed litigants to appeal and invest the additional money for the appeal rather than settle after a district judge's claim construction ruling. If the district court's claim construction ruling is reversed on appeal, the costs go even higher, and the litigation goes on with the uncertainty beginning anew, unless the Federal Circuit's ruling makes a claim construction determination in the case that is dispositive.

I. The Root Bases of the Predicament

A. United States District Court Judges' Workloads

The workload of the 678 United States district court judges who are spread across the ninety-four federal districts of our country is one reason for the predicament. We district judges are the front line of jurists in all areas of federal litigation. I feel honored and privileged to be among the district judge [*4] ranks, but I must confess that when I pause to reflect on the totality of the job expected of us federal trial judges, I sometimes feel overwhelmed. We 678 people, with the help of our senior judge colleagues, must address all the cases filed in the federal district courts. Our caseload includes frivolous pro se civil matters brought by individuals who vent their frustrations in the words of a filed complaint, cases filed by the United States government that fall within the full breadth of the federal criminal code which Congress seems to incessantly expand, and all other cases, including complex patent disputes that

involve the latest and most sophisticated technological advancement.

Each new civil complaint filed in a United States District Court is assigned at random to a particular judge of the district court in which that complaint is filed. Because we United States district judges must be generalists to deal with a large and diverse caseload, n16 we typically cannot concentrate on staying abreast of the changing nuances of any specific area of the law. We must focus on the law pertaining to each case on our respective dockets as we attempt to resolve that case. The sheer volume and diversity of a district judge's workload demand constant attention to efficiency, without which the caseload would burgeon beyond the capability of any one judge to provide justice as is necessary in each case. Consequently, changes in the law unrelated to the case at hand may easily go unnoticed by a district judge until he or she must make a decision in that area of the law related to a case on his or her docket.

As a United States district court judge, I enjoy patent cases. I also enjoy the diversity of the federal litigation over which I preside. I enjoy the challenge of learning or renewing my acquaintance with each specific area of the law in which I must become adept to resolve each case. I do not have the luxury of spending the time to learn more about a specific area of the law than necessary to resolve a particular case or a particular issue that may need resolution. I may address an issue in depth in one case, especially if it is a patent case, and never see that issue again during the rest of my career on the bench. For example, Dana Corp. v. American Precision Co. n17 is an opinion I wrote during my first four months on the

bench regarding the patent law issue of repair versus reconstruction. I found that the defendant's processes did not infringe any of the plaintiff's three patents-in-suit. n18 Although my decision was affirmed by the Federal Circuit, n19 in the more than twenty years that have passed since then, I have never had occasion to address that issue again.

To put this problem in actual figures, in the twelve-month period ending March 31, 2006, there were approximately 313,000 total civil and criminal filings across the United States, n20 and less than 1% (2812) of those cases involved patents. n21 If spread across the 678 district judges, there are [*5] approximately four patent cases per judge per year as compared to an average of 490 other civil cases and criminal cases per judge per year. n22 Over 8000 of those civil and criminal cases (greater than 2.5%) were in my district, the Northern District of Illinois, which is headquartered in Chicago. n23 Of those 8000 plus filings in my district, around 460 of those cases were intellectual property filings, making my district the fifth busiest district court in the country for intellectual property litigation. n24 Yet, only 5.5% of our district's docket was intellectual property, and less than 1% was a patent case. n25 Due to the diversity of cases handled by us district court judges, we have limited time to learn and sort through the intricacies of the new technologies which form the heart of the disputes. Because of the constant press of the rest of our caseload, we often find it difficult to devote the time that, in a perfect world, would be devoted to any case, let alone a complex patent case. Additionally, the expertise developed dealing with one patent case on a particular district judge's docket

is often fleeting since, as mentioned earlier, patent cases on average are less than 1% of our collective caseload and the law can change quickly. n26

B. District Judges are Typically Generalists by Trade and Training

United States district court judges are appointed by the President and confirmed by the Senate, but typically not for their prowess in patent litigation. Certainly, no one inquired into that area of my background when I was appointed in 1985. I dare say that, because we district judges are generalists and must deal with every type of federal case assigned to our respective dockets, none of my fellow district judges in Chicago were asked, before being appointed to the bench by the President, about their acumen in patent law. Many of my colleagues on the bench do not share my enthusiasm for and enjoyment of presiding over patent cases and other intellectual property cases. Because I have taught an advanced law school seminar entitled "Intellectual Property Trial Advocacy" every year for more than two decades at the University of Illinois and other law schools, I have had the incentive to stay abreast of patent law as it has evolved, and I have attempted to incorporate new technological issues into my course materials during that time. Many other judges on the federal district courts, however, pressed as they are to resolve legal issues in other areas of the law, do not remain attuned to the current patent law issues because they do not have an interest in patent law or did not have patent litigation experience before their appointment to the bench. n27

[*6] Additionally, judges without a technical background must learn the rudiments of technological analysis and the advances in technology that form the basis of a patent dispute on the job, without the assistance of unbiased tutors. We district judges typically are provided our education on the pertinent technology by the respective advocates in the case before us, who understandably emphasize the key points of the facts in their respective client's favor. Without a technical background to help us parse the respective parties' arguments, we judges are sometimes drawn to the wrong conclusion more than we otherwise would be if the factual premises underlying the factual basis of the dispute had a familiar ring based upon our prior experience or education.

II. Factors Contributing to the Predicament

A. The De Novo Review Standard

Before we district court judges shoulder all the responsibility for the part of the patent litigation predicament stemming from the high reversal rate, mentioned earlier, n28 let me just say in our defense that there is another major factor contributing to the number of patent claim construction reversals. The decisions we district judges make regarding patent claim construction are currently reviewed by the United States Court of Appeals for the Federal Circuit under a de novo standard, which allows the United States Court of Appeals for the Federal Circuit to determine the correctness of our rulings as to the definition of patent claim terms without any deference to what we did in the district court. n29

As a result of the de novo standard of appellate review applied to our claim construction determinations, we United States district court judges feel like the late comedian Rodney Dangerfield because our opinions "get no respect." n30 The de novo standard allows the United States Court of Appeals for the Federal Circuit to look at our determinations anew and determine the correctness of our rulings based upon factual and legal arguments presented by counsel to the Court of Appeals for the Federal Circuit, rather than what was presented to us trial court judges. n31

A de novo standard of review is what the Federal Circuit announced in its 1995 en banc decision in Markman as to district judges' claim construction determinations. n32 In 1996, the United States Supreme Court, in affirming the Federal Circuit's en banc decision in the Markman case, agreed that judges, [*7] not juries, should make patent claim construction determinations. n33 The Supreme Court in its Markman opinion said nothing, however, about the de novo standard of review. n34 The Federal Circuit revisited the de novo issue en banc two years later in 1998 and ruled once again in Cybor Corp. v. FAS Technologies, Inc., n35 that the de novo standard is the proper standard to be applied in reviewing district judges' patent claim determinations. n36 That remains the standard today. n37

While claim construction involves many of what one would consider to be factual determinations, it is reviewed entirely de novo as an issue of law by the Federal Circuit, even though the meaning of a patent claim term at the time of filing of the patent

application has no precedential affect on the meaning to be given to that same claim term used in another patent in another field of art.

B. The Varying Guidance

The law denoted as precedential by the Federal Circuit is supposed to provide guidance to us lower court judges, but that has not occurred as clearly as desired regarding patent claim construction since the Supreme Court's 1996 decision in Markman for two reasons: first, the Federal Circuit's articulation of the methodology to be used in the analysis desired of us district judges has varied over the past ten years; and second, the claim term definition in a particular case involving a particular patent is without precedential value in another case involving another patent, because of the factual differences inherent among different patent cases.

While the precedent of the Court of Appeals for the Federal Circuit provides some general guidance to us lower court judges as to the methodology we should employ in going about the task of claim construction, the Federal Circuit's precedential opinions seem to provide conflicting views in the nuances of the task and the value we are to ascribe to each factor that we consider.

Shortly after the Supreme Court's 1996 opinion in Markman, the Federal Circuit issued Vitronics Corp. v. Conceptronic, Inc., n38 and established that evidence intrinsic to the patent and the patenting process was to be used and, only upon the intrinsic evidence's failure to provide the answer, was extrinsic evidence to be considered. n39 In 1999, the Federal Circuit, in Pitney Bowes, [*8] Inc. v. Hewlett-

Packard Co., n40 clarified that the Vitronics prohibition against the use of extrinsic evidence unless the intrinsic evidence failed to furnish the meaning was a "warning." n41 The Federal Circuit in Pitney Bowes stated that "Vitronics does not prohibit courts from examining extrinsic evidence, even when the patent document is itself clear." n42 In 2002, three years after Pitney Bowes and after a series of opinions in which the Federal Circuit stressed that claim terms were to be heavily presumed to have their ordinary meaning unless the patentee specificity rebutted the ordinary meaning in the text of the patent, n43 the Federal Circuit issued Texas Digital Systems, Inc. v. Telegenix, Inc., n44 which promoted dictionaries and encyclopedias as "objective resources" that are "the most meaningful sources of information to aid judges in better understanding" the patent claim terminology to be defined. n45 The Federal Circuit informed us district judges and the patent litigation world that the Vitronics opinion's relegation of dictionaries and similar sources of the ordinary meaning of a patent claim term to the status of extrinsic evidence was "misplaced." n46

Two years ago in its en banc opinion in Phillips v. AWH Corp., n47 the Federal Circuit provided us a further clarification that the patent specification, not a dictionary, was the best source to which district judges should look for the ordinary meaning of a term. n48 The Federal Circuit in Phillips considerably diminished our reliance on dictionaries. n49 The Phillips opinion gave some guidance for us to follow as we district judges wrestle with the difficulties and pitfalls of claim construction in patent litigation. Phillips, however, again eschewed the

notion that factual determinations were a necessary part of the claim construction process and again reaffirmed the de novo review standard. n50

Therefore, we district judges now fully understand that we must follow the algorithmic procedure of looking first to the patent and its claims, specifications, prior art references, and drawings depicting the preferred embodiments; and then turning to the prosecution history, which is the give-and-take with the Patent and Trademark Office ("PTO") during the patenting process; and finally turning to sources extrinsic to the patenting process such as dictionaries, the testimony of experts (who are persons skilled in the relevant art, into whose shoes we judges are to figuratively step in interpreting **[*9]** claim language), or the testimony of the inventor (even though the inventor is supposed to have the prerogative to be the lexicographer as to the patent's terms). Yet, the value or weight to be accorded any inconsistent information stemming from the appropriate patent sources, as we consult them seriatim, remains the difficulty that I believe we district judges collectively have in patent claim term construction. The guidance on those points is understandably scant because of the factual differences we face as we move from interpreting the terms of a patent in one case to another, and because, as stated earlier, the definition of a claim term used in one patent has no precedential effect on the meaning to be given to that same claim term used in another patent in an unrelated field. n51

An additional procedural wrench thrown into the claim construction process that seems to grate against the notions of uniformity and predictability of

claim construction intended by the Supreme Court's Markman decision is due in part to the fact that the Federal Circuit has thus far not provided us district judges with a set of uniform rules for the timing and format of the claim construction process. n52 The district courts apply a variety of modes for the claim construction procedure, with, for example, 81% holding hearings on claim construction, 58% deciding claim construction before trial but after discovery, and 70% of claim construction proceedings held after the close of discovery. n53 Furthermore, since the Supreme Court's decision in Markman, district courts are twice as likely to decide cases based on summary judgment. n54 The ad hoc manner in which claim construction is decided increases unpredictability and expense, especially if, after discovery and a trial or determination on a motion for summary judgment, a Federal Circuit panel reverses the district court's claim construction.

C. The Costs of Patent Litigation

Another key problem with the high reversal rates - besides frustrating us United States district court judges and the parties before us when we have to do it a second time - is the cost and uncertainty that reversals add to the expense of patent litigation in the United States. In the United States, litigation costs of taking a patent lawsuit through discovery range from $ 350 thousand to $ 3 million, and the costs of a patent case taken through to appeal range from $ 650 thousand to $ 4.5 million. n55 For comparison, in the United Kingdom, which is the most expensive country in Europe for patent litigation, the costs range from approximately £ 200 thousand (about US$ 370 thousand at current [*10]

rates) to £ 1.5 million (about US$ 2.775 million). n56 In Germany, which is the least expensive of the European countries, costs range from <euro>15,568 (about US$ 19,677) to <euro>41,888 (about US$ 52,944), although infringement and validity are tried separately. n57

The higher costs of patent litigation in the United States as compared to European countries is apparently due to several factors. The first, as already discussed, is the unpredictability of the outcome in patent litigation in the United States. n58 This unpredictability may encourage litigants to take one of two tactics: (1) to pursue the litigation process to the hilt through expensive discovery, pretrial proceedings, trial, and appeal; or (2) alternatively, to settle early a case upon which they may have otherwise prevailed to minimize the costs of litigation. n59

The second apparent reason for the cost differential between the United States and the European patent systems is that the patent litigation pretrial discovery process takes a longer time in the United States. In the United States, claim construction often takes place after the close of discovery but before trial. n60 Pretrial discovery in a patent case typically takes several months and sometimes years. The patent case then proceeds to potentially dispositive motions and, if denied, to trial. This all must happen under our court procedures before the party who loses the claim construction determination can appeal the claim construction issue to the Federal Circuit. Should the Federal Circuit determine on appeal that the district judge's claim construction was erroneous, all the money and

time spent litigating the case in the district court following that erroneous claim construction by the district court is thus a wasted expense. n61

The third apparent reason for the difference in costs between the United States and Europe is that the litigation process in the United States can be expensive, regardless what happens on appeal. For example, preparing and briefing a motion for summary judgment in a patent case in the district court could cost the parties hundreds of thousands of dollars. Additionally, the typical United States district judge does not preside over more than one or two patent cases in a year, and counsel for the parties must bear the costs of [*11] providing the judge who has been assigned a patent case with an update on patent law as well as the factual background of the advancement in the technology at issue in each patent case. n62

III. Proposals to Remedy the Predicament

As seen from the discussion above, there are several factors at work in creating the current patent predicament in this country: the de novo standard of review, the varying and inconsistent guidance that has been provided by the Federal Circuit, and the heavy and diverse workload and lack of technical and patent expertise of the district judges. In addition, there has been general dissatisfaction with the quality of patents granted by the PTO, creating a greater incentive and need to litigate the validity of the granted patents through litigation. n63 With these multiple factors contributing to the problem of greater uncertainty and increased costs in patent litigation, there is no singular proposal that can

effectively resolve the patent predicament. Instead, this complicated problem requires the application of several complementary proposals to create a thorough and comprehensive solution.

Below are several proposals, some of which have already been put into effect to some extent. I cannot emphasize enough that I believe that implementing all of these proposals so that they will work together to directly address the key problems currently affecting the quality of the U.S. patent system and patent litigation is the procedure that should be followed to remedy the patent litigation predicament.

A. The PTO Establishing a Procedure for Post-Grant Review that Includes Claim Term Clarification

A grant of a patent by the PTO initiates the patentee's legal right for a set period of monopoly that may be enforced through litigation in federal court. n64 To ignore the PTO's role when attempting to remedy the patent predicament is to cut off one of several valuable avenues for resolving the problems regarding both the accuracy of claim construction determinations and the high cost of patent litigation. The patent litigation predicament does not begin in the district court, but in the PTO with the grant of a patent. In the last several years, the PTO has been criticized for allowing patents of less than top quality to be issued. n65 The low quality of patents granted by the PTO is due to a [*12] variety of impediments the PTO has had to face, including the lack of proper funding, an ever-increasing filing rate, and the fast-paced development of new technological subjects that are potentially patentable. n66 Any viable attempt at

reforming the patent litigation system must address the issues of quality at the PTO.

To comprehensively address the inaccuracy, unpredictability, and high costs of patent litigation, the first remedy that I support as part of the solution to the patent litigation predicament, along with other strategies, is a review period following the issuance of a patent called a "post-grant review" proceeding, during which third parties may challenge the grant of a patent. n67 The idea of the post-grant review had been the subject of a 2005 bill introduced in the 109th session of the House of Representatives, n68 but unfortunately the bill never proceeded further than being heard by the House Subcommittee on Courts, the Internet, and Intellectual Property. n69 The post-grant review proceeding would provide third parties opposed to the grant of the patent a specified window of time from the date a patent is issued to challenge the patent before the PTO in a forum with limited discovery. n70 In the proposed legislation, an estoppel exception had been included to ensure that a challenger to the patent would not be prevented from presenting new evidence in a subsequent federal case that could not have been reasonably discovered during the post-grant review proceeding. n71

The post-grant review proceeding would help to increase the accuracy of patent litigation results and lower patent litigation costs in several ways. First, a post-grant review proceeding would result in higher quality patents because the added layer of review would allow the PTO the opportunity for a second look at the patents it issues that may be disputed later in the courts and would better ensure the quality of the PTO's decisions. n72 Allowing the PTO

this opportunity to make corrections to newly issued patents would protect potential litigants who are negatively affected by a patent's issuance, while still allowing for the patentee to be heard further within the PTO through an adversarial administrative process. n73 Another advantage to a post-grant review process by the PTO is that the district courts in addressing patent litigation could have greater confidence in determinations that the PTO made during its [*13] post-grant review, such as the construction given to key claim terms by the PTO. This would lead to a more predictable and accurate patent system. Therefore, in any subsequent litigation involving a patent that has been provided post-grant review within the PTO, the parties to the litigation and the district judge presiding over that litigation would benefit substantially by having a better understanding of how the terms of the patent should be construed. This would ensure greater consistency and predictability with regard to patent claim construction by district judges. The increased uniformity and predictability of claim construction would, in turn, help to lessen the incentive of patentees and alleged infringers to gamble on the outcomes of litigation at the district court level and on appeal to the Federal Circuit by encouraging earlier settlements. n74

The post-grant review process should therefore result in lower costs in any subsequent patent litigation because the process would provide parties faced with a potential infringement lawsuit an alternate, less expensive forum for challenging the validity of a patent. n75 The costs for the post-grant review forum are estimated to be between $ 500

thousand and almost $ 4 million per party. n76 Doubts expressed about the procedure pertain to some distrust of the PTO's ability to correct its own mistakes. n77 In addition, under the previously proposed legislation, parties would be estopped from litigating the issue of invalidity a second time in federal court. n78 The possibility of being estopped from pursuing a claim in federal court could be a disincentive against using the post-grant review procedure, yet the lack of such a provision would not effectively reduce costs because parties would continue to litigate in federal court after using the post-grant review process. n79 A middle ground could be achieved by allowing review of the PTO's post-grant determinations in United States district courts with a standard of review that allows deference to the PTO. n80

B. The Federal Circuit Providing Greater Deference and Guidance to District Judges' Patent Claim Term Determinations

Of course, solutions aimed solely at the PTO are not enough to stem the tide of rising costs, unpredictability, and inaccuracy in patent litigation. Any effective solution must also focus on the courts and specifically the **[*14]** relationship between the district courts and the Federal Circuit. Remedying the high reversal rate by the Federal Circuit of district court judges on claim constructions necessitates addressing the intertwined issues of the predictability of outcomes and the accuracy of decisions. As I previously outlined, the source of the patent litigation predicament is rooted in district judges' generalist skill sets and the large and varied caseloads each district judge has, which prevents

district judges from having sufficient time and resources to fully master the nuances of complex patent litigation. n81 These issues in the district courts are then complicated by the need for guidance from the Federal Circuit with regard to claim construction, along with the unforgiving de novo standard of review applied to claim construction issues by the Federal Circuit. n82 To address either the issue of the standard of review or the lack of guidance individually, without regard to the other, creates a choice between predictability and accuracy. Thus, any proposal must encompass both these aspects of the patent litigation predicament. Hence, both objectives must be addressed by the Federal Circuit in order to revive Markman's unfulfilled promise of greater uniformity and predictability. n83

In the en banc decision in Phillips v. AWH Corp., the Federal Circuit reaffirmed its intention to continue to apply a de novo standard of review to claim construction, despite criticism that the unforgiving standard increases the unpredictability of patent litigation by encouraging litigants to gamble that the Federal Circuit will reverse the district judge's determination. n84 Several other possible standards of review could be applied instead of the current de novo standard. For example, starting with a very deferential standard, the Federal Circuit could review the district court's claim construction for abuse of discretion. At the other end of the spectrum, but not quite as far as the de novo standard of review, the Federal Circuit could review questions of law de novo but findings of fact for clear error, to be overturned only if the Federal Circuit is firmly convinced that a mistake was made. This standard

would necessitate the recognition by the Federal Circuit of the underlying fact-based issues involved in claim construction, rather than viewing claim construction entirely as a question of law. Finally, the Federal Circuit could create a standard of review somewhere closer to clear error rather than de novo review. n85

A more deferential standard of review would reduce the reversal rate. A district judge may put more time and effort into construing a claim if the judge [*15] knows that his or her decision will be given some weight and deference. n86 This is just human nature. When an individual knows that the "buck stops here," greater effort and time is often put into the decision. This not only applies to the district judges but to the counsel for the parties who appear in patent cases in the district courts. Patent litigation counsel will have a greater incentive to obtain a favorable district court ruling than they have now. Because this approach would result in a lower reversal rate of district judges' construction of patent claim terms, enforcement of the patent law would be more predictable.

A majority of the current group of judges on the Federal Circuit appear willing to reconsider the rule of no deference to district judges' patent claim determinations mandated by the de novo standard of review. Counting the positions stated or joined in by the Federal Circuit judges in the order denying the petition to hear Amgen Inc. v. Hoechst Marion Roussel, Inc., n87 a careful observer can see that, in an appropriate case, reconsideration of the de novo review standard may occur. It appears that there now may be sufficient votes to modify the de novo

standard of review that the Federal Circuit reaffirmed nine years ago sitting en banc in Cybor Corp. v. FAS Technologies, Inc. n88 Chief Judge Michel specifically cited:

> (1) a steadily high reversal rate; (2) a lack of predictability about appellate outcomes ... ; (3) a loss of the comparative advantage often enjoyed by district judges who heard or read all the evidence and may have spent more time on the claim constructions than [the appeals panel] ever could on appeal; and inundation [of the Federal Circuit] with the minutia of construing numerous disputed claim terms ... in nearly every patent case. n89

In addition to Chief Judge Michel, Judge Rader, Judge Newman, and the Federal Circuit's newest judge, Judge Moore, all dissented from the denial of the petition for a rehearing en banc based on their desire to address the de novo standard of review. n90 Further, the concurring Judges Gajarsa, Linn, and Dyk wrote separately to state that their concurrence "should not be read as an endorsement of the panel's claim construction in this particular case, nor as an unqualified endorsement of the en banc decision in Cybor Corp. v. FAS Technologies, Inc." n91

Revising the standard of review alone, without more, however, will **[*16]** presumably sacrifice some accuracy at the district court level for greater certainty in the litigation process, because the precision of district judges' claim term interpretations will not be scrutinized as closely. n92 To ensure an appropriate level of correctness in district judges' claim term determinations, the Federal Circuit will

have to change more than just the de novo standard of review. The Federal Circuit must also fulfill the promise implied in Markman of providing United States district judges with a uniform and clear system of guidance with regard to claim construction. n93 As mentioned earlier, many district judges, regardless of our desire to do it right, have limited experience and familiarity with patent law and even less experience with the new technologies at issue in patent infringement litigation. Additionally, due to the press of our other judicial business, we are not able to explore and understand the subtleties of the new technology as much as we would like. n94 In order to avoid an exchange of diminished accuracy for greater certainty, a more deferential standard must go hand in hand with greater guidance to the district courts. n95 The Federal Circuit must pronounce clearer canons of construction to better assist district court judges. Problematically, the judges of the Federal Circuit, based on their written opinions, currently appear to disagree among themselves regarding the precise methodology that should be used in claim construction. n96 To help resolve the patent litigation predicament, our patent litigation system must provide uniform guidance to us district judges when we preside over patent cases.

C. District Judges' Greater Use of Case-Specific Specialized Advisors

To benefit fully from the guidance the Federal Circuit would be providing us in its precedential opinions as to the patent law and procedure, I believe we district judges should increase our use of specialized advisors, such as special masters, to assist us in better understanding the technology involved in

the specific patent cases before us. A special master is generally a court-appointed attorney or professor "authorized under our *Federal Rule of Civil Procedure 53* to assist judges in various pretrial proceedings, such as discovery, settlement, recommendations for findings of law and fact, the formulation of remedies, or the calculation of damages." n97

Because we generalist district judges in the United States are expected to decide claim term meanings from the viewpoint of a person of ordinary skill in the field of invention and to determine how such a person would understand the claim at the time of invention, we typically need some assistance in [*17] understanding the technology that is relevant to the patent in the suit. n98 The premise behind a district judge's designation of a special master to assist the judge with claim construction or other tasks in patent litigation is to delegate to an individual with a better technical background an otherwise judicial task and obtain a recommendation from that person that can be evaluated by the parties and the judge before the judge decides to accept or reject the special master's recommendation. n99 The special masters selected for such tasks would have technical expertise that would assist us district judges, who typically do not have the extensive background that is necessary to address a particular patent. n100 Employing the expertise of special masters more than we district judges do at the present time would help us to be better informed when making our claim language determinations and, hopefully, to lower the reversal rate. n101 For example, Judge John T. Ward in the United States

District Court of the Eastern District of Texas, who has helped to make this district one of the busiest federal districts for patent litigation filings, in part due to the enactment of specific local patent rules, appoints technical advisors to provide recommendations as to claim construction. n102 More of us district judges could follow Judge Ward's lead and appoint special masters or technical advisors to assist us in evaluating the issues raised by the technological advances of patents-in-suit before us.

There are drawbacks, however, to the patent litigation system that must be considered regarding the appointment of special masters. Our system of justice places a high value on the concept of generalist trial judges addressing a wide range of issues, under a theory that the decisions of many generalists judges synthesize to create a better system of law. n103 By using a special master who has expertise in the technical issues of a patent case, the parties may lose some of the benefits provided by having a generalist trial judge who is experienced in all procedural aspects of litigation. A special master typically will not have that procedural expertise.

Generalist judges also protect against what has been referred to as the "capture" of a specialized judge - or here, a special master - who deals only with one area of law, to a particular specialized view of a special interest group. n104 I note that the "capture" concept is often raised by commentators as [*18] a concern associated with specialized courts and judges as well. n105 However, I believe that we district judges can keep an open mind and decide each case on its individual merits. That is what our oath of office demands, and I believe we have and will

continue to uniformly perform our judicial duties in that manner.

D. Congress' Creation of Patent Case Reassignment Procedures and Training for District Judges

A further recent potential innovation for ensuring better accuracy and predictability in patent litigation involves a proposal in Congress to enact case reassignment procedures along with training provisions for district court judges, set forth in the new pilot patent bill H.R. 34 (formerly H.R. 5418), sponsored by Representative Darrell Issa and co-sponsored by Representative Adam Schiff. n106 On February 12, 2007, the United States House of Representatives voted to pass H.R. 34, and on February 13, 2007, the bill was received in the U.S. Senate, read twice, and referred to the Senate's Committee on the Judiciary, where, as of the date of this writing, it remains. n107

H.R. 34 proposes to create a pilot program in United States District Courts nationwide, where district judges of the pilot project district courts would choose whether to opt into hearing patent cases. n108 The patent cases involved in the pilot program would still be randomly assigned. n109 However, if a patent case was assigned to a judge who desires not to hear patent cases, the case could be randomly reassigned within that district court to a judge who had voluntarily joined a group of judges in that district who are designated to hear patent cases. n110 In addition, the legislation proposes to fund $ 5 million a year for the education and professional development of designated judges in the area of

patent law. n111 Those funds would also be available for judicial training and for compensation of specialized patent law clerks with technical expertise. n112

This solution would ensure greater accuracy of district judge decisions in patent litigation. The volunteering judges who form the pool of designated patent trial judges would have enhanced knowledge of patent law, greater exposure to those types of cases, and could also have access to funds to further educate themselves in patent litigation, as well as to hire clerks with technical **[*19]** backgrounds to assist. n113 Additionally, this pilot program may result in greater efficiency for deciding patent cases because judges with greater expertise in patent law would more quickly resolve patent matters. n114 Furthermore, several district courts have already begun to implement patent-specific local rules to ensure better procedural efficiency. n115 With better knowledge and procedural efficiency, the proposal may result in greater predictability of decisions, and from that, parties will hopefully have lower costs in connection with patent litigation.

At the same time, the designation of district judges to hear patent cases would alleviate many of the concerns identified by opponents in the United States to a specialized patent trial court. The judges overseeing patent cases would still be generalists who hear a full caseload of other civil and criminal matters. The designated judges, armed with additional training, would be able to better understand the technological issues and the nuances associated with the advancements in technology without isolating litigants at the trial level in a forum

apart from other litigation matters. These designated judges would thus continue to be a part of the traditional jurisprudence in the United States, encouraging cross-pollination among different areas of law and protecting against the balkanization of areas of law. As mentioned earlier, the diverse caseload of the designated patent trial judge would also prevent any isolation or myopic approach to patent law and protect against the idea that a specialized judiciary could be captured by the patent bar. n116

I favor the H.R. 34 bill sponsored in the House of Representatives by Congressmen Issa and Schiff, which would allow the self-designation of willing United States District Court Judges to hear patent cases at the trial level as another remedy to help resolve the patent litigation predicament. n117

There are, of course, worries voiced about the proposed pilot program. Among them is a concern that the pilot program will foster forum shopping by encouraging litigants to file patent cases in those districts. n118 While I believe that forum shopping generally should be discouraged, in this instance, where the choice of forum is based on a district's development of an expertise in the complicated area of patent law, the federal judicial system of our country will not be harmed by encouraging this type of forum selection. On the other side of the forum shopping concern is the speculation that smaller districts that are not eligible to participate in the pilot program, but have developed local patent rules and expertise, such as the Eastern District of Texas, may see fewer cases. I find the chance of this outcome occurring to be negligible. I believe that [*20]

litigants seeking the predictability provided by local patent rules in those districts will still wish to file patent cases there. n119

Another criticism of the pilot patent program is that the program is not accompanied by any substantive patent law reforms or changes in the procedures applicable to patent litigation. n120 I agree that the self-designation of judges alone is not enough to fix the complicated problems in our patent litigation system. However, as discussed earlier, no one proposal can address the multifaceted patent litigation predicament. Rather, the pilot program is a viable solution among several complementing remedies that can accomplish an overall change to the patent litigation in our country.

IV. Conclusion

The implementation of all four of these proposals - PTO post-grant review, the Federal Circuit's changing of the standard of review and providing more guidance, district judges' increased use of special masters, and H.R. 34's pilot patent program of designated district judges - would move us forward in resolving the complicated patent litigation predicament that we have in the United States. While each proposal individually may provide some assistance toward resolving the problem, the implementation of all four remedies would provide the most comprehensive approach to correcting the intertwined problems of high costs, inaccuracy, and unpredictability that plague our current patent system and have created the patent litigation predicament.

Legal Topics:

For related research and practice materials, see the following legal topics:

Civil Procedure Judicial Officers Judges General Overview Patent Law Jurisdiction & Review Subject Matter Jurisdiction Appeals Patent Law U.S. Patent & Trademark Office Proceedings General Overview

FOOTNOTES:

n1. James F. Holderman, Judicial Patent Specialization: A View from the Trial Bench, *2002 U. Ill. J.L. Tech. & Pol'y 425 (2002).*

n2. H.R. Rep. No. 96-1307, pt. 1, at 3 (1980), available at http://ipmall.info/hosted resources/lipa/ patents/ House and Senate.pdf.

n3. *28 U.S.C. § 1295* (2000). In addition to patent appeals from the United States district courts, the United States Court of Appeals for the Federal Circuit hears appeals from the United States Board of Contract Appeals, the United States Court of International Trade, the United States Court of Federal Claims, the United States Court of Appeals for Veterans Claims, the Department of Veteran Affairs, the International Trade Commission, the Merit Systems Protection Board, the United States Office of Compliance of the United States Congress, the United States Patent and Trademark Office ("PTO"), as well as from decisions of the Secretary of Agriculture, the Secretary of Commerce, and the Office of Personnel Management. Id.

n4. *517 U.S. 370 (1996).*

n5. *Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed. Cir. 1995).*

n6. *138 F.3d 1448, 1473 (Fed. Cir. 1998)* (Rader, J., concurring in part).

n7. *Id. at 1476.*

n8. Kimberly A. Moore, Are District Court Judges Equipped to Resolve Patent Cases?, *15 Harv. J.L. & Tech 1, 2 (2001)* [hereinafter Moore, Are District Court Judges Equipped].

n9. Christian A. Chu, Empirical Analysis of the Federal Circuit's Claim Construction Trends, *16 Berkeley Tech. L.J. 1075, 1092 (Fall 2001).*

n10. *Id. at 1104.*

n11. E.g., Gretchen Ann Bender, Uncertainty and Unpredictability in Patent Litigation: The Time is Ripe for Consistent Claim Construction Methodology, *8 J. Intell. Prop. L. 175, 206-07 (Spring 2001)* (finding a 40% reversal rate from Markman opinion through 2000); Kimberly A. Moore, Markman Eight Years Later: Is Claim Construction More Predictable?, *9 Lewis & Clark L. Rev. 231, 236-39 (2005)* [hereinafter Moore, Markman Eight Years Later] (indicating a 40.8% reversal rate if summary affirmances are excluded, a 34.51% if summary affirmances are included, and a 37.5% reversal rate in cases in which the Federal Circuit held one or more patent claims wrongly construed); Andrew T. Zidel, Patent Claim Construction in the Trial Courts: A Study Showing the Need for Clear Guidance from the Federal Circuit, *33 Seton Hall L. Rev. 711, 745-46 (2003)* (showing a 41.5% reversal rate (39 out of 94) of

district court claim construction decisions during 2001).

n12. Admin. Office of the U.S. Courts, Federal Judicial Caseload Statistics, 35 tbl.B-8 (2006) [hereinafter Federal Judicial Caseload Statistics], available at http://www.uscourts.gov/caseload2006/contents.html.

Table B-8.

U.S. Court of Appeals for the Federal Circuit - Appeals Filed, Terminated, and Pending During the Twelve-Month Period Ending March 31, 2006

			Terminations				
Source of Appeals	Pending April 1, 2005	Filed	Total	By Judges	Other	Percent Reversed	Pending Mar. 31, 2006
. . .							
U.S. District Courts	381	498	487	352	135	14	392
. . .							

n13. Id. at 26 tbl.B-5.

n14. Janice M. Mueller, Taking "Inventory" After Markman: The Supreme Court Confirms a New Era in Patent Litigation, L. Works, June 1996.

n15. *Amgen Inc. v. Hoechst Marion Roussel, Inc., 469 F.3d 1039, 1040 (Fed. Cir. 2006)* (Michel, C.J., dissenting).

n16. Holderman, supra note 1, at 428.

n17. *618 F. Supp. 288 (N.D. Ill. 1985).*

n18. *Id. at 295.*

n19. *Dana Corp. v. Am. Precision Co., 827 F.2d 755 (Fed. Cir. 1987).*

n20. Federal Judicial Caseload Statistics, supra note 12, at 36 tbl.C, 57 tbl.D.

n21. Id. at 44 tbl.C-2.

n22. Id.; Admin. Office of the U.S. Courts, Judicial Caseload Profile Report (2006), http://www. uscourts. gov/cgi-bin/cmsd2006.pl [hereinafter Judicial Case load Profile Report].

n23. Federal Judicial Caseload Statistics, supra note 14, at 37 tbl.C, 58 tbl.D.

n24. Id. at 36 tbl.C, 48 tbl.C-3, 57 tbl.D; Judicial Caseload Profile Report, supra note 22 (select "Illinois Northern").

n25. Federal Judicial Caseload Statistics, supra note 12, at 44 tbl.C-2; United States District Court for the Northern District of Illinois, Civil Case Report (2007), available at https://ecf.ilnd.uscourts.gov/cgi-bin/login.pl?686576583596168-L 835 0-1.

n26. Holderman, supra note 1, at 429.

n27. Id.

n28. See supra notes 7-10 and accompanying text.

n29. *Phillips v. AWH Corp., 415 F.3d 1303, 1328 (Fed. Cir. 2005)* (en banc); Kevin J. Culligan & John P. Hanish, (Im)pure Questions About Claim Construction in Patent Cases After Phillips, Metropolitan Corp. Couns., June 2006, at 9, 9; Steve Pollinger, A Battle for Definitional Supremacy in Patent Language Disputes, Tex. Law., Sept. 27, 2004.

n30. Brainy Quote.com, Rodney Dangerfield Quotes, http://www.brainyquote.com/quotes/quotes/r/rodneydang165663.html (last visited Mar. 14, 2007).

n31. *Merck & Co. v. Teva Pharms. USA, Inc., 395 F.3d 1364, 1370 n.7 (Fed. Cir. 2005).*

n32. *Markman v. Westview Instruments, Inc., 52 F.3d 967, 977-79 (Fed. Cir. 1995).*

n33. *Markman v. Westview Instruments, Inc., 517 U.S. 370, 376 (1996).*

n34. Id.

n35. *138 F.3d 1448, 1456 (Fed. Cir. 1998)* (en banc).

n36. *Id. at 1456.*

n37. Analyzing the positions expressed by the individual Circuit Judges in the November 22, 2006 order denying a petition to hear *Amgen Inc. v. Hoechst Marion Roussel, Inc., 469 F.3d 1039, 1040-46 (Fed. Cir. 2006),* it appears a majority of the Federal Circuit Judges would consider the issue again.

n38. *90 F.3d 1576, 1582-83 (Fed. Cir. 1996).*

n39. *Id. at 1584* ("No doubt there will be instances in which intrinsic evidence is insufficient to enable the court to determine the meaning of the asserted claims, and in those instances, extrinsic evidence, such as that relied on by the district court, may also properly be relied on to understand the technology and to construe the claim.").

n40. *182 F.3d 1298 (Fed. Cir. 1999).*

n41. *Id. at 1308.*

n42. Id.

n43. See, e.g., *Rexmond Corp. v. Laitram Corp., 274 F.3d 1336, 1342-45 (Fed. Cir. 2001)* (giving the word "portion" its broad ordinary meaning in light of the text in the patent); *Johnson Worldwide Assocs. v. Zebco Corp., 175 F.3d 985, 990-92 (Fed. Cir. 1999)* (finding that the patentee did not prescribe a special meaning to the term "heading" in the prosecution history).

n44. *308 F.3d 1193 (Fed. Cir. 2002).*

n45. *Id. at 1203.*

n46. *Id. at 1203-04.*

n47. *415 F.3d 1303 (Fed Cir. 2005).*

n48. *Id. at 1321.*

n49. Id.

n.50. See generally id. (explaining that the overbroad nature of dictionaries necessitates further factual investigation when determining claim construction).

n51. *Medrad, Inc. v. MRI Devices Corp., 401 F.3d 1313, 1318 (Fed. Cir. 2005); PIN/NIP, Inc. v. Platte Chem. Co., 304 F.3d 1235, 1244 (Fed. Cir. 2002).*

n52. Cheryl L. Johnson, Why Judges are Destined to Flunk Their Markman Tests: The History of Their Claim Construction Assignment, 873 PLI/Pat 9, 58 (2006).

n53. Id. at 57-60.

n54. Id. at 61.

n55. Salvatore Anastasi & Kevin Alan Wolff, Am. Intellectual Prop. Law Ass'n Report of the Economic Survey 2005, at I-108 to I-110 (Sept. 2005).

n56. Ray Black, Never Mind the Quality, Feel the Pinch, Managing Intell. Prop., May 1, 2005, at 26.

n57. Id. at 27 Chart 1.

n58. See Moore, Are District Court Judges Equipped, supra note 8, at 2 (presenting the results of an empirical study that shows that district court judges improperly construe patent claims in one-third of the cases appealed to the Federal Circuit).

n59. *Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1473, 1475-76 (Fed. Cir. 1998)* (Rader, J., concurring in part); see also Moore, Are District Court Judges Equipped, supra note 8, at 14 (arguing that the outcome of the case is uncertain until the appeal is decided).

n60. See Alan L. Briggs, Claim Interpretation Proceedings and Appellate Review, 2002-2003 A.B.A. Sec. Intell. Prop. 601(A), 601(A)-1, available at http://www.abanet.org/intelprop/annualreport05/content/02-03/COMMITTEE%20NO%20601.pdf (indicating that 78% of all claim construction hearings occur after discovery but before trial, while 16% of hearings are conducted prior to or during discovery, only 8% are held before discovery, and the smallest percentage of hearings - 6% - take place at trial).

n61. See Moore, Are District Court Judges Equipped, supra note 8, at 2-3 ("In the absence of a route for expedited appeal of claim construction, district courts are forced to proceed with lengthy and expensive patent litigation based on their frequently erroneous claim construction.").

n62. See John B. Pegram, Should the U.S. Court of International Trade Be Given Patent Jurisdiction Concurrent with That of the District Courts?, *32 Hous. L. Rev. 67, 70-71 (1995)* (describing the lack of experience in the trial and management of patent cases for the average district court judge).

n63. See Stuart Minor Benjamin & Arti K. Rai, Who's Afraid of the APA? What the Patent Law System Can Learn from Administrative Law, 95. Geo. L.J. 269, 270 (2007) (recognizing widespread dissatisfaction with the patent system and the poor quality of issued patents); *Johnson, supra* note 52, at 70-71.

n64. 5 Donald S. Chisum, *Chisum on Patents § 16.04* (2006).

n65. Patient [sic] Overhaul: Hearing Before the Subcomm. on Courts, the *Internet, and Intellectual Property of the H. Comm. on the Judiciary, 109th Cong. (2005) (statement of Richard Levin, President, Yale University), 2005 WL 1010525;* Benjamin & Rai, supra note 63, at 270; *Johnson, supra* note 52, at 70-71; John R. Thomas, The Responsibility of the Rulemaker: Comparative Approaches to Patent Administration Reform, *17 Berkeley Tech. L.J. 727, 728 (2002).*

n66. Thomas, supra note 65, at 728.

n67. See Priya Ganapati, Patent Law Reform Proposed, Inc.com, May 10, 2005, http://www.inc.com/news/articles/200505/patents.html (discussing how such a proposal may favor small businesses).

n68. H.R. 2795, 109th Cong. (1st Sess. 2005), available at http://www.thomas.gov/cgi-bin/query/z?c109:H.R.2795.IH:.

n69. Bill Summary & Status of H.R. 2795, 109th Cong. (1st Sess. 2005), http://www.thomas.gov/cgi-bin/bdquery/z?d109:HR02795:@@@X.

n70. David B. Cochran, Toward a Post-Grant Patent Opposition Proceeding in the United States, Mondaq Bus. Briefing, Apr. 21, 2006, available at http://www.mondaq.com/article.asp?articleid=39280.

n71. H.R. 2795 § 336(a)(2); Cochran, supra note 70.

n72. *Johnson, supra* note 52, at 70.

n73. Steven R. Ludwig, A U.S. Post-Grant Patent Opposition System - Will It Be Used?, Intell. Prop. Today, Mar. 2005, at 13-14.

n74. Moore, Are District Court Judges Equipped, supra note 8, at 27-28.

n75. Ludwig, supra note 73, at 14.

n76. Id.

n77. Cochran, supra note 70.

n78. H.R. 2795, 109th Cong. § 336(a)(1) (1st Sess. 2005), available at http://www.thomas.gov/cgi-bin/query/z?c109:H.R.2795.IH: ("After a certificate has been issued under section 335 in accordance with the decision of the panel in an opposition proceeding, the determination with respect to an issue of invalidity raised by an opposer shall bar the opposer from asserting, in any subsequent proceeding before the Office or a court involving that opposer under this title, that any claim of that patent addressed in the opposition proceeding is invalid on the basis of any issue of fact or law actually decided by the panel and necessary to the determination of that issue.").

n79. Ludwig, supra note 73.

n80. Benjamin & Rai, supra note 63, at 326-27.

n81. See supra Part I.A-B.

n82. See supra Part II.A-B.

n83. Cheryl Lee Johnson, The False Premise and Promises of Markman's Decision to Task Judges with Claim Construction and the Judicial Scorecard, 837 PLI/Pat 9, 60 (2005).

n84. *Phillips v. AWH Corp., 415 F.3d 1303, 1328 (Fed. Cir. 2005).*

n85. *Merck & Co. v. Teva Pharms. USA, Inc., 395 F.3d 1364, 1381 (Fed. Cir. 2005)* (Rader, J., dissenting) (referencing a statement by a judge of the Federal Circuit: ""Review is really not de novo after all. It is unfortunate that there is no label in between de novo and clear error review.'" (quoting Symposium, The Past, Present and Future of the Federal Circuit: Judicial Constellations: Guiding Principles as Navigational Aids, *54 Case W. Res. L. Rev. 757, 761 (2004)))*. Rader criticized the Federal Circuit judges for claiming to give some deference to district courts' claim construction but upholding the de novo standard of review or, alternatively, proclaiming publicly that they give some deference to district courts' claim construction when in fact they do not. *Merck, 395 F.3d at 1381.*

n86. Improving Federal Court Adjudication of Patent Cases: Hearing Before the Subcomm. on Courts, the Internet, and Intellectual Property of the H. Comm. on the Judiciary, 109th Cong. 43 (2005) [hereinafter Katopis Statement] (statement of Chris J. Katopis, Counsel, Drinker Biddle & Reath LLP) available at http://judiciary.house.gov/media/pdfs/katopis100605.

pdf ("There is growing evidence that federal district judges feel as if their work is treated like a rough draft and they are wasting their time.").

n87. *469 F.3d 1039 (Fed. Cir. 2006)* (en banc).

n88. *138 F.3d 1448 (Fed. Cir. 1998)* (en banc).

n89. *Amgen, 469 F.3d at 1040;* Paul Devinsky, United States: A Fractured Federal Circuit Ready to Change Cybor Rules, Mondaq. Bus. Briefing, Jan. 4, 2007, http://www.mondaq.com/ article.asp?articleid=45300 &searchresults=1.

n90. *Amgen, 469 F.3d at 1040-46.*

n91. *Id. at 1045.*

n92. Moore, Are District Court Judges Equipped, supra note 8, at 29.

n93. See *Markman v. Westview Instruments, Inc., 517 U.S. 370, 384 (1996)* (holding that the question of claim construction is one for the judge).

n94. Moore, Are District Court Judges Equipped, supra note 8, at 29.

n95. Moore, Markman Eight Years Later, supra note 11, at 245-46.

n96. Id. at 246.

n97. LeRoy L. Kondo, Untangling the Webs: Federal Court Reform Through Specialization for Internet Law and Other High Technology Cases, *2002 UCLA J.L. & Tech. 1, 80 (2002),* http://www.lawtech journal.com/articles/2002/01 020309 kondo.pdf.

n98. *Phillips v. AWH Corp., 415 F.3d 1303, 1313, 1324 (Fed. Cir. 2005)* (en banc); see also *On Demand Mach. Corp. v. Ingram Indus., 442 F.3d 1331, 1337*

(Fed. Cir. 2006) (summarizing the significance of Phillips).

n99. George Newcombe & Jeremy S. Pitcock, The Markman Hearing Itself - Practical Tips and Strategies, 837 PLI/Pat 207, 221 (2005).

n100. See Kondo, supra note 97 (describing the relationship between judges and special technical advisors); see Katopis Statement, supra note 86 (describing the technical contribution of court-appointed special masters).

n101. Moore, Are District Court Judges Equipped, supra note 8, at 29.

n102. Julie Creswell, So Small a Town, So Many Patent Suits, N.Y. Times, Sept. 24, 2006, § 3, at 1; Robert M. Isackson & Bridgette Y. Ahn, Legislation Proposes Pilot Program Toward Development of Specialized District Court Judges, N.Y.L.J., Dec. 4, 2006, at S10, col. 1.

n103. Katopis Statement, supra note 86, at 38.

n104. See Improving Fed. Court Adjudication of Patent Cases: Hearing Before the Subcomm. on Courts, the Internet, and Intellectual Prop. of the H. Comm. on the Judiciary, 109th Cong. 10 (2005) (statement of Kimberly A. Moore, Professor of Law, George Mason University School of Law) (arguing that a specialized patent court could be "captured" by the patent bar, but instead suggesting a limited number of generalist judges with proper experience be assigned patent cases).

n105. Arti K. Rai, Specialized Trial Courts: Concentrating Expertise on Fact, *17 Berkeley Tech. L.J. 877, 896 (2002);* e.g., Harold Bruff, Specialized

Courts in Administrative Law, *43 Admin. L. Rev. 329, 331-32 (1991).*

n106. H.R. 34, 110th Cong. (2007), available at http://thomas.loc.gov/cgi-bin/query/z?c110:H.R.34.RFS:.

n107. Bill Summary & Status of H.R. 34, 110th Cong. (2007), http://thomas.loc.gov/cgi-bin/bdquery/z?d110:HR00034:@@@L&summ2=m&.

n108. H.R. 34 at § 1(a)(1).

n109. H.R. 34 at § 1(a)(1)(B).

n110. H.R. 34 at § 1(a)(1).

n111. H.R. 34 at § 1(f)(1).

n112. H.R. 34 at § 1(f).

n113. Shahnaz Mahmud, More Specialist Patent Judges Could be on the Way, Managing Intell. Prop., Jan. 28, 2007, available at http://www.managingip.com/?Page=9&PUBID=198&ISS=23218&SID=67341.

n114. Id.

n115. N.D. Ca. Local Patent R. 16-6 - 16-11; N.D. Ga. Local Patent R. 1-7; D. Mn. Local Patent R. 1-83; W.D. Pa. Local Patent R. 1-5; E.D. Tx. Local Patent R. Appendix M.

n116. See supra Part I.

n117. H.R. 34.

n118. See Lynn A. Malinoski, Why Does Congress Care Where Patent Cases Are Filed? Legal Intelligencer, Oct. 18, 2006, at 5 (noting that the concern of forum shopping may have been addressed by a modification to the bill).

n119. Isackson & Ahn, supra note 102.

n120. Id.